TECHNOLOGY DEPT.

May 1, 1958

Telephone Engineer

AND MANAGEMENT

THE TELEPHONE INDUSTRY MAGAZINE

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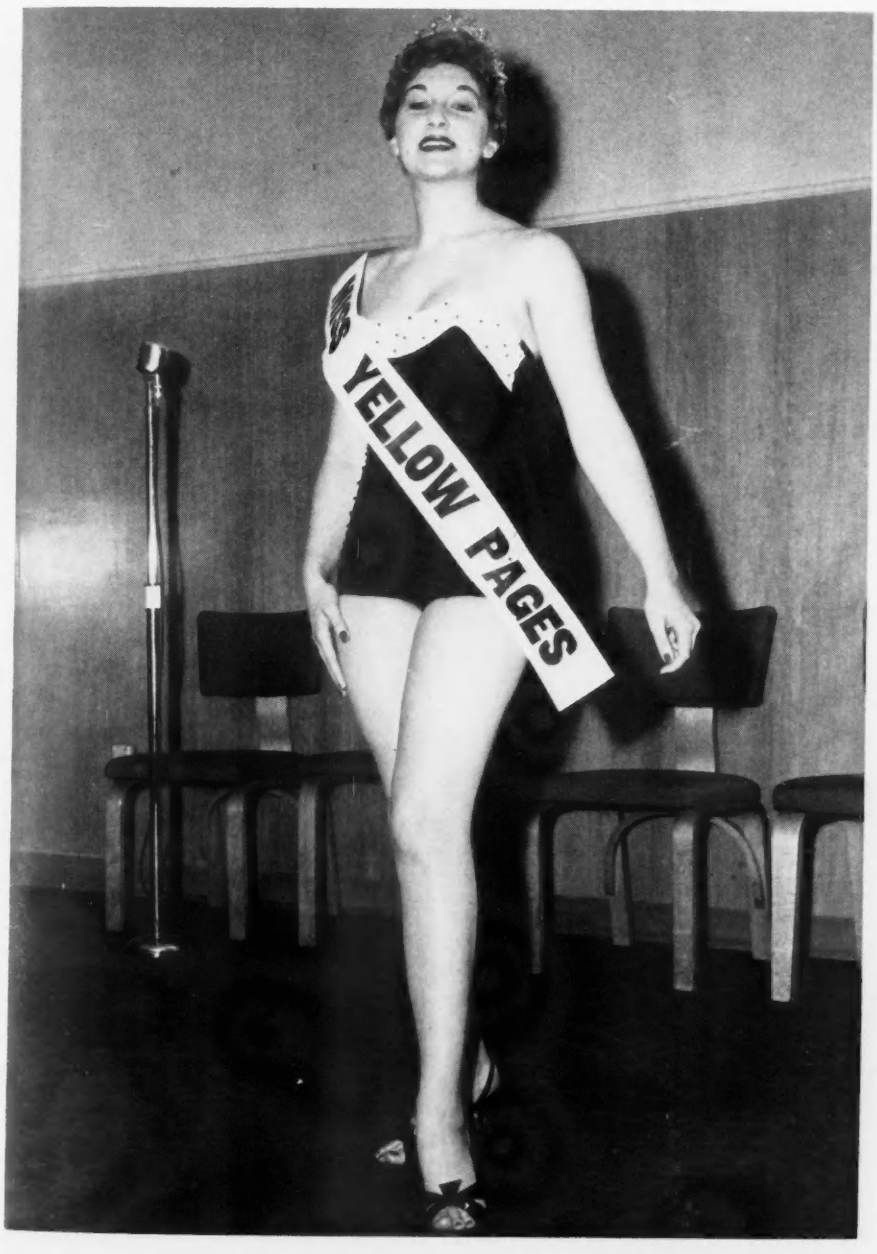

- **GIMMICKS & GIVE-AWAYS**
  By F. J. Eherenman
- **BURIED SERVICE CONCEPT**
  By John S. Reed
- **LESSONS IN MANAGEMENT**
  By Ernest W. Fair
- **MICROWAVE SOLVES A PROBLEM**
  By Bruce Barksdale
- **WASHINGTON NEWSLETTER**
  See Page 12
- **INDUSTRY NEWS BRIEFS**
  See Page 16
- **NEW PRODUCTS' SHOWCASE**
  See Page 48
- **THE TE&M EDITORIAL**
  See Page 25

Directory earnings climb

when our "Revenue Men" move in

OUR DIRECTORY "Revenue Men"—working from 32 strategically located sales offices—providing the Independent Telephone Industry with a flexible and highly skilled telephone directory organization, are equipped to render a Complete and Quality Directory Service.

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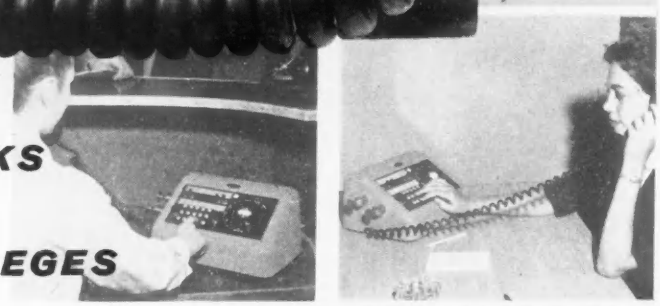

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Then reserve a spot in our 40A PABX schedule

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They have been installed in a wide variety of businesses. Offices, factories, banks, schools, motels, prisons, and hospitals all have them.

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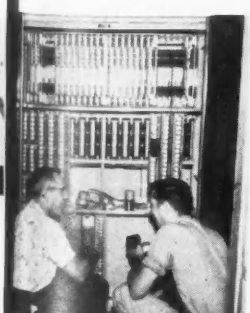

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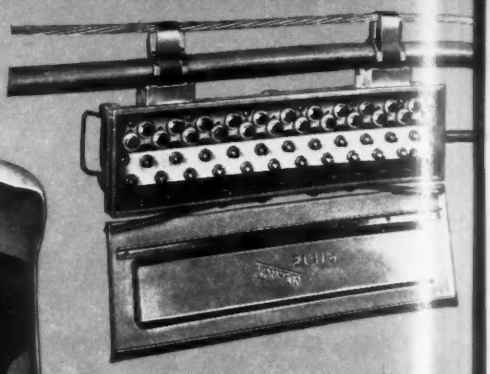
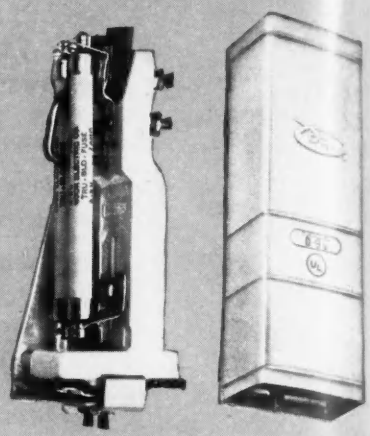
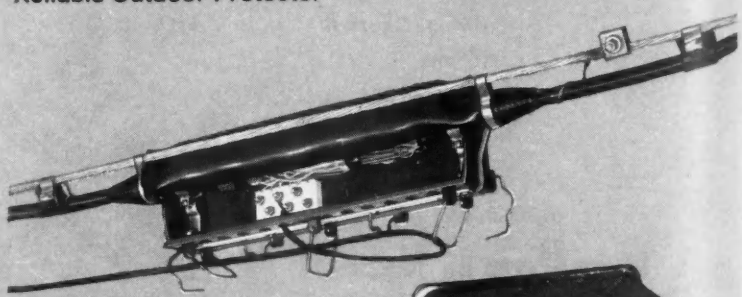


Reliable Strand Cable Terminal

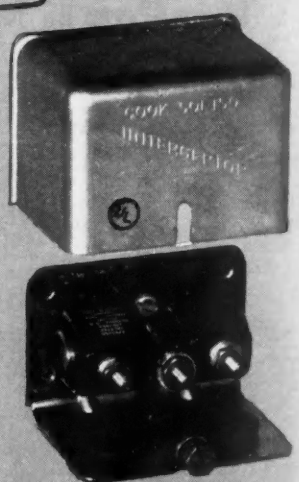
Reliable Outdoor Protector



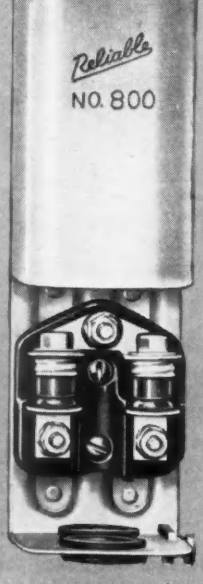
Cook Substation Protector



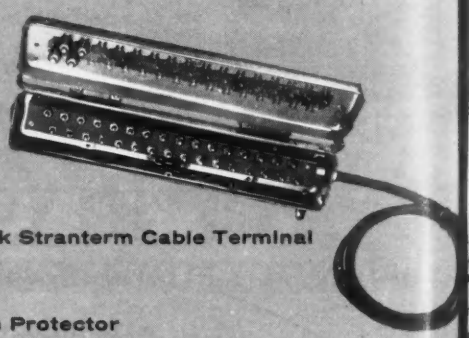
Reliable Ready-Access Terminal



Cook "Interceptor" Fuseless Protector



Reliable Fuseless Station Protector



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ABOUT THIS ISSUE

IF you have been searching for the correct answers to your questions on the use and installation of the new underground cable and wire you will find them in *John S. Reed's* article "*The All-Buried Telephone Service Concept*" (page 36.)

WE BELIEVE *F. J. Eherenman's* article "*Gimmicks, Gadgets and Give-Aways*" (page 29) is packed with ideas that will provide you with an economical and workable plan for constantly reminding your potential telephone customer that the telephone services he reads about in his favorite magazine are available at his local exchange business office.

AUTHOR *Ernest W. Fair* continues his "*Lessons In Management Series*" by pointing up the importance of learning the art of handling Public officials (page 43). Before writing the article, Mr. Fair talked with several executives who have learned how to deal with the men and women in city, county and state offices. What he learned will provide you with ideas capable of boosting your popularity with public officials.

THE Federal-State Action Committee is still pursuing its push for congressional approval of legislation aimed at "*crediting the states with up to 40% of the federal excise tax on local telephones. . . .*"

In this issue our *Washington Newsletter* reports the bill "*is in the first stages of drafting and will be ready for early submission to Congress. . . .*"

We suggest you read *Washington Newsletter* (page 14). That bit of reading will — (1) bring you up to date on the communications excise tax situation, and (2) provide you with some good data to be used by you and your subscribers for urging Congress to repeal a tax that is economically unsound and has outlived its war-time usefulness.

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Advertising Representatives

WEST COAST: Keith H. Evans & Associates,
3723 Wilshire Blvd., Los Angeles 5, Calif.
Telephone: DUnkirk 2-8981,
593 Market St., San Francisco 5, Calif.
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Telephone Engineer

AND MANAGEMENT

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VOL. 62 No. 9 MAY 1, 1958

ARTICLES

Editorial — "Headlines Do Backfire" 25
"Gimmicks, Gadgets & Give Aways" by F. J. Eherenman 29
The All-Buried Telephone Service Concept John S. Reed 36
Getting Along With Public Officials Ernest W. Fair 43
Microwave Solves Right-Of-Way Problem Bruce Barksdale 45

FEATURES

Coming Conventions 8
Across The Editor's Desk 10
Washington Newsletter 14
Industry News Briefs 16
Last Call For USITA Engineering-Management Conference 44
New Products' Showcase Dick Reynolds 48
Suppliers' News Briefs 54
The Back of The Book John G. Reynolds 64

DEPARTMENTS

Buyers' Guide 49
Professional Services 58
Classified Advertising 60
Advertisers' Index 63

FRONT COVER

Forrest J. Eherenman, author of the article "Gimmicks, Gadgets and Give Aways" (see page 29) sent us our front cover photo. "Miss 'Yellow Pages'," he said, "is LINDA MARTIN of United Telephone Co. of Indiana, Inc., Warsaw . . . We tried to make it look as though she had just been selected as queen of a beauty contest, but she hasn't for real — although I can't imagine that making any difference to your readers . . ."

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INDIANA Telephone Association, Claypool Hotel, Indianapolis, May 7-8, 1958.

WISCONSIN State Telephone Association, Plankinton House Hotel, Milwaukee. May 14-15, 1958.

ILLINOIS Telephone Association, Hotel Pere Marquette, Peoria, May 21-22, 1958.

MISSOURI-KANSAS Telephone Associations, Town House, Kansas City, Kans., May 26-27, 1958.

PENNSYLVANIA Independent Telephone Association, Bedford Springs Hotel, Bedford, May 26-28, 1958.

MAINE, NEW HAMPSHIRE, VERMONT Telephone Associations, Somerset Hotel, Rockland, Maine, June 3-5, 1958.

CALIFORNIA Independent Telephone Association, Sheraton-Palace Hotel, San Francisco, June 4, 5, 6, 1958.

NEW YORK Telephone Association, Scaroon Manor, Schroon Lake, June 16-18, 1958.

WASHINGTON - Oregon Telephone Association, Multnomah Hotel, Portland, Oregon, June 19-21, 1958.

ALASKA Telephone Convention, Baranoff Hotel, Juneau, Alaska, August 11-13, 1958.

MICHIGAN Independent Telephone Association, Pantlind Hotel, Grand Rapids, Sept. 9, 10, 11, 1958.

ARKANSAS Telephone Association, Hot Springs, (Hotel To Be Announced), Sept. 15-16, 1958.

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the

"P" clamp*

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in

STAINLESS STEEL

In developing a new line of drop wire clamps, Reliable has passed-up aluminum wedges and shims and is producing STAINLESS STEEL clamps. Even the most economical one is all stainless except the aluminum shell.

A choice of eight clamps gives you the size and combination best suited to your drop wire and your locality.

Substantial savings are passed on to the owners of the telephone plant.

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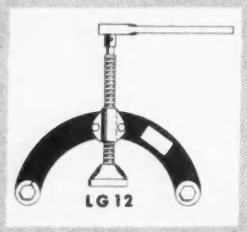
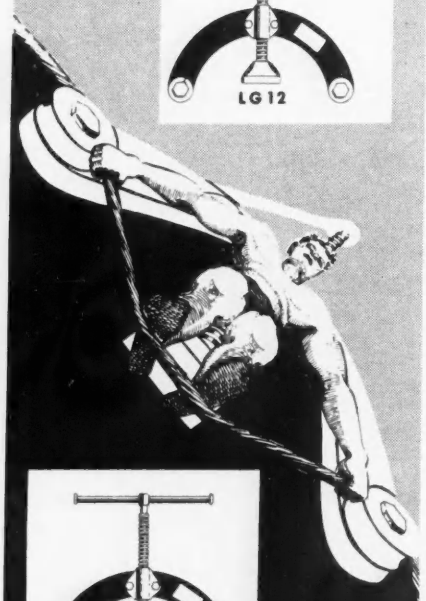
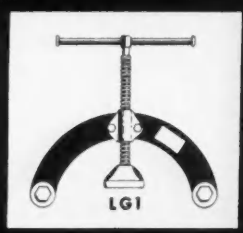
For pulling slack in a messenger you need a man with the strength of Hercules, the ruggedness of Atlas, the speed of Mercury . . . or a Little Giant Slack Puller.







If you need to pull slack in a messenger for any reason, either of the Little Giant Slack Pullers, the LG1 slip handle or the LG12 ratchet handle will do the job Quick, Easy and Safe.

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CABLE SPINNING EQUIPMENT CO.

3100 TOPEKA AVE.
TOPEKA, KANSAS

- MOSTLY ABOUT PEOPLE across the editor's desk

Harry N. Hammond

CONGRAULATIONS to *Harry N. Hammond*, chief engineer for The Southwestern States Telephone Co., Brownwood, Texas on his appointment as a member of the Executive Reserve of the Communications Division of the Business and Defense Service Administration.

Hammond is the first to be appointed to the Communications Division from the Southwest area which includes Arkansas, Louisiana, New Mexico, Oklahoma, and Texas.

A resident of Brownwood since 1934, Hammond recently received a service pin commemorating his 30th anniversary of continuous service with Southwestern States.

W. V. Kahler

LAST MONTH *W. V. (Bill) Kahler*, president of Illinois Bell Telephone Co., was elected president of the Telephone Pioneers of America. Kahler, who has served as senior vice president of the group for the past two years, succeeds Cleo F. Craig, recently retired chairman of the board of the American Telephone & Telegraph Co.

The Theodore N. Vail Chapter of the organization, composed of Illinois Bell employes, is the largest in the international organization. It has a membership of nearly 14,000 men and women. The Hawthorne Chapter of the Western Electric Co. has a membership of more than 9,500 in the Chicago area.

Arthur F. Adams Dies

THE telephone industry was saddened on March 28 when it learned of the death of Arthur F. Adams, 77, a telephone lineman at 18 who rose to head the Gary group of telephone companies.

Adams joined Theodore Gary in 1905 and became vice president of the Home Telephone Co., of Joplin, Mo., and with Gary and his son, Hunter L. Gary, organized the Theodore Gary Investment Co. and later Theodore L. Gary & Co., of Kansas City.

Other firms they organized included the International Telephone Sales & Engineering Corp., of New York; the Automatic Electric Co., Chicago; the Automatic Telephone Manufacturing Co., Ltd., Liverpool, and the International Automatic Telephone Co., Ltd., of London.

He had been chairman of the Anglo Canadian Telephone Co., of Montreal; the Automatic Electric Co.; the British Columbia Telephone Co.; Associated Telephone & Telegraph Co., and Telephone Bond and Share Co. He also served as chairman of the board of the Commerce Trust Co. in Kansas City.

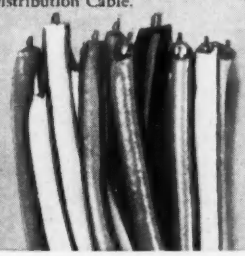
Dr. Harold S. Black

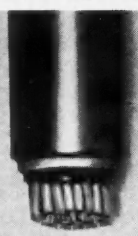
DR. HAROLD S. BLACK, Bell Telephone Laboratories, Inc., research engineer, whose more than 60 inventions have made major contributions to long distance and overseas telephone communications and to the field of electronics, has been awarded the 1957 Lamme Gold Medal by the American Institute of Electrical Engineers. The Medal, a major engineering honor, will be presented to Dr. Black on June 23 during the Summer General Meeting of AIEE.

Dr. Black was honored "For his many outstanding contributions to telecommunications and allied electronic arts, especially the negative feedback amplifier and the successful development and application of the negative feedback amplification principle'"

THE MESSAGE IS: MONSANTO

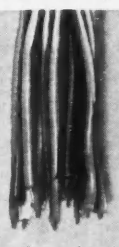
Sturdy OPALON 72285 over primary insulation for color-coded, weather-resistant jacketing. Polyethylene 14202 and 11302 for primary insulation of conductors and insulation for steel support wire in Multi-Pair Distribution Cable.





Polyethylene 12203 and 12253 for primary insulation, Polyethylene 14202 for jacketing in jacketed Thermoplastic-insulated, Thermoplastic-sheathed Telephone Cables.

OPALON 1706 for semi-rigid primary insulation in various types of communication cable.



Rugged weather-resistant color-coded OPALON 72285, available in eight standard colors, for primary insulation and Polyethylene insulation for steel support wire on Urban Distribution Cable.

OPALON 1006 for primary insulation, OPALON 72217 for jacketing in Inside Telephone Wiring Cable.

your finest single-source for **polyethylene and vinyl** *telephone insulating compounds*

Wire and cable producers like the multiple choice that Monsanto supply offers—9 formulations, polyethylene or Opalon vinyl, all specially developed for critical communications applications.

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Call in your local Monsanto representative for the full communications story, or write for technical data and other information to Monsanto Chemical Company, Plastics division, Room 467, Springfield 2, Massachusetts.

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Washington NEWSLETTER

Bill To Transfer Phone Excise To States In Final Draft

WHILE NOT much is expected to come from any such proposals during the current session of Congress at least, the Federal-State Action Committee — a group composed of state governors and Cabinet-level federal officials to consider possible exchanges of responsibilities between the state and federal governments — has announced that a bill to credit the states with up to 40% of the federal excise tax on local telephone service "is in the final stages of drafting and will be ready for early submission to Congress."

The statement was contained in a summary of a committee meeting held in Nashville, Tenn. It said that the local telephone service excise tax will "*be coordinated with other legislation already before Congress relating to tax procedures and definitions relating to local telephone service. The Council of State Governments' draft of proposed state tax legislation on local telephone service will, in turn, be coordinated with the proposed amendment to the Internal Revenue Code.*

The Joint Action Committee reached an agreement at a meeting last October in Chicago whereby 40% of local telephone excise revenue would be credited to the states. Under the proposal, the 10% local telephone federal excise tax would be continued for five years, but the states would be urged to enact a 4% excise of their own.

If they did, telephone users would continue to pay a 10% total levy and the telephone company, as tax collector, would deduct the state tax from the amount remitted to the federal government. At the end of five years, the federal tax would drop to 6%, whether or not the states had imposed taxes of their own.

Meanwhile, two groups not usually found "on the same side of the table" in appearances before Congressional committees — the US Independent Telephone Association and the Communications Workers of America — have urged that Congress repeal the 10% telephone excise tax.

In a statement filed with the House Ways & Means Committee, the USITA has branded the war-time imposed federal excise tax on telephone service a "gross inequity" and a highly discriminatory levy on an essential service.

Calling for immediate repeal, USITA said it would be "the most practical means of providing a general tax reduction immediately stimulating to the national economy and universally beneficial to all our people."

USITA declared that the "discriminatory nature of this tax has been stressed by industry representatives in testimony before your committee on many occasions. It has been pointed out that telephone service is distinguished by the fact that it is the only one of the essential household utilities so taxed. Our customers and the investors in our business as well, cannot understand why telephone service should be singled out from gas, electricity, and water to be taxed in this discriminatory fashion. They are naturally fearful that a tax continued so long after the end of the emergency which prompted it may tend to become a permanent part of the general tax structure.

"Communications services are carrying a large burden in the form of taxes. The telephone industry's bill for federal income and operating taxes amounted to $1,500,000,000 for 1957. In addition, telephone customers paid nearly $600,000,000 in federal excise tax on their service.

"This is a sum that is becoming increasingly burdensome to the telephone user. In the final analysis, telephone customers must pay the industry's taxes. We estimate that the average telephone customer's bill included more than $5 in taxes for the year 1957. This fact is even more striking when it is realized that out of every dollar the customer currently pays for telephone service, approximately 28 cents goes for taxes, including excise levies. Our customers have been bearing their full share of the tax load for many years. The time has come for relief."

In a statement filed with the committee for the CWA, the union's President Joseph A. Bierne said such a step would "boost the national economy in general, and the communications industry in particular."

Terming the communications excise tax "economically unsound" and as having "outlived its wartime usefulness," Mr. Bierne said that in 1957 American telephone users paid over $550,000,000 to the federal government in telephone excise taxes.

"If this $550,000,000 were in the hands of telephone users to be spent on telephone service, this would have the very desirable and necessary effect of stimulating telephone usage and might forestall further layoffs in the telephone industry.

"We estimate that had all the money which went to the federal government in telephone excises been spent directly on telephone service, income would have been available for wage payments at current levels for close to 80,000 additional workers in the industry," Mr. Bierne said.

"If telephone excise tax money had been spent on adding a second or third telephone extension in many homes or changing from a black telephone set to one of the many beautiful colored instruments now available, or if it had been spent on any one of a multitude of excellent servcies available to telephone users, there probably would be no layoffs today in the telephone industry. Further, the industry could be offering employment to some of the present 5,500,000 unemployed in other industries."

Mr. Bierne argued that the telephone excises have become "unwarranted and economically unsound deter-

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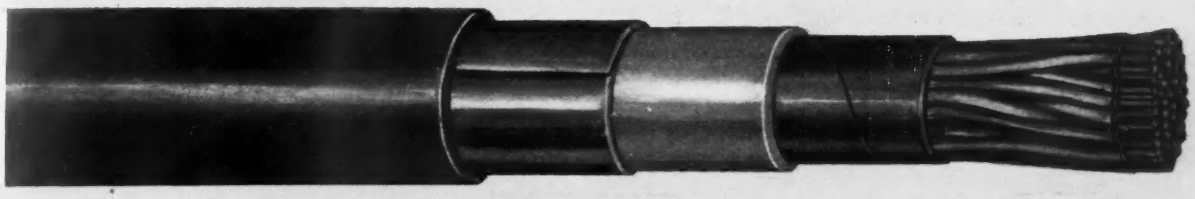

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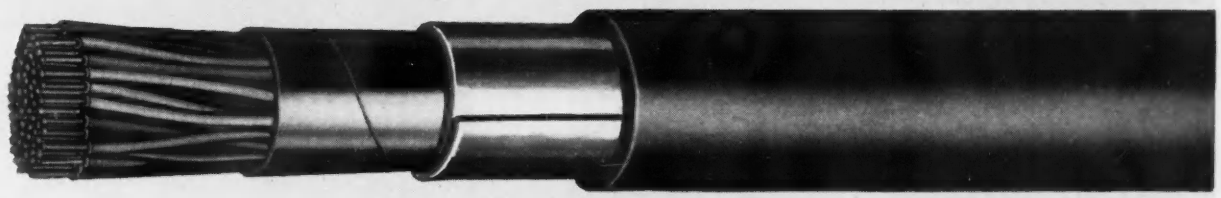

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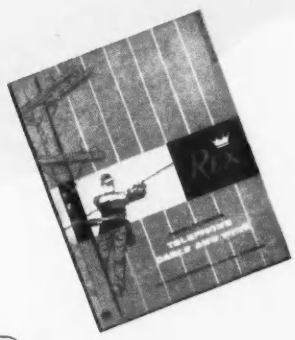

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Washington NEWSLETTER

(Concluded from page 12)

rents to telephone use." Asking for their repeal, he stated that "Anything which helps stimulate telephone usage or puts telephone tax money back into the consumer's pocket will have a good effect upon a multitude of different economic areas.

"It is not possible to show statistically to what extent high telephone excise taxes discourage telephone calls or the installation of new telephones or other telephone services. However, we ask the committee to recognize the common sense validity of our argument that elimination of telephone excises would make available over $550,000,000 of purchasing power so necessary today."

Total Communication Excises Hit $635,000,000 In 1957

ON THE subject of excise taxes, final figures on tax collections during calendar 1957 show that United States' telephone users paid $359,825,000 for excise levies on local telephone service, the Internal Revenue Service has reported. The comparable figure for calendar 1956 was $323,982,000.

For excises on long-distance telephone, telegraph, cable, and radio messages, also at 10%, customers paid $252,911,000, against $229,912,000 in calendar 1956, IRS points out. The 10% tax on leased wires and the 8% impose on wire and equipment service totaled $22,654,000, compared with $20,810,000 the preceding year.

Total excises on communications services in calendar 1957 totaled $635,390,000, against $574,074,000 the preceding year.

New Highway Bill Retains Utility Relocation Cost Provision

VARIOUS proposals that would have amended provisions of the 1956 highway construction act related to reimbursement to public utilities for the costs of relocating facilities were all rejected by Congress in passing a 1958 federal-aid highway bill, but at this writing the full story of current legislation was still not completed.

Expectations were that President Eisenhower would veto the measure, which adds $1.8 billion to the highway construction authorization for fiscal 1959 and boosts the spending in the federal-aid highway program to more than $5 billion for the next fiscal year.

What the next step would be was hard to predict, but it appears fairly certain that in any legislative moves taken by the Senate and House — assuming that a veto would send the bill back to Congress — nothing will be done that would change the reimbursement principle, at least for the coming fiscal year.

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industry NEWS briefs

Transfers, Mergers Continue Pace: Northern Kans. Tel. To Buy 13 Exchanges

THE fast-growing Northern Kansas Telephone Co., Nortonville, followed up its announcement of the opening of new general offices at Ottawa, with an announcement of its plans to purchase 13 additional exchanges. President H. H. Welsch said the exchanges are located at Mound City, Mapleton, Altoona, Benedict, Buffalo, Coyville, Fall River, LaFontaine, Neosho Falls, Piqua, Thayer, Toronto and Quincy.

Elsewhere across the country the following transfers were reported:

● In Minnesota the Alexandria Interurban Telephone Co. purchased the Carlos Telephone Co. The Carlos company served 317 stations in Carlos and Holmes City.

● In Minnesota, the East Otter Tail Telephone Co. has purchased: (1) Bertha (Minn.) Telephone Co. (699 stations); (2) Walker (Minn.) Telephone Co. (751 stations); (3) Deer Creek Telephone Co. (195 stations); (4) Nevis (Minn.) Telephone Co. (112 stations); (5) Akeley (Minn.) Telephone Co. (217 stations). In another Minnesota property transfer the Mille Lacs Telephone Co., Osakis, purchased the Haybrook Telephone Co., Isle, (19 stations).

● Kansas Corporation Commission has approved an application for change in ownership of the Richland (Kans.) Telephone Exchange. Lloyd Shank, KCC chief engineer, said the commission granted permission to the Richland Telephone Co. to quit business and also gave Southwestern Bell Telephone Co. permission to serve the area. After FCC approval is granted, Southwestern Bell will purchase the exchange from the Richland company's receivers.

● Sale of 15 exchanges by Western Light & Telephone Co. to Pioneer Co-operative Telephone Co., has been approved by the Oklahoma Corporation Commission. Manager Roy C. Boecher, Kingfisher, Okla., of Pioneer Co-operative Telephone Co. said he plans to convert the exchanges to dial.

● The Griswold (Ia.) Cooperative Telephone Co. has obtained an option to purchase the Elliott Mutual Telephone Co. for $15,000. The transaction is subject to REA approval of a request for funds to rebuild the Elliott system. Miles Morgan, manager at Griswold, said his company expects to spend about $167,000 to modernize the Elliott company. The program calls for rebuilding the Elliott plant and converting to a dial system within the next two years. Approximately 400 subscribers are served by the Elliott firm.

● The Railroad & Warehouse Commission of Minnesota approved joint application of the Kalevala Telephone Association, seller, and the Pineland Telephone Co., purchaser, for approval of the transfer of all the telephone properties of the Kalevala Cooperative Telephone Association. The Kalevala Co-op operated a telephone system in the village of Kettle River, serving 150 stations.

REA Reports New Telephone Loans: Five Independents Get Allocations

THE RURAL Electrification Administration has approved the following rural telephone loans, the U. S. Department of Agriculture announced last month:

● St. Matthews (S. C.) Telephone Co.; $178,000. Three REA loans totaling $457,000 to date will make it possible for the borrower to provide new and improved service for 1,083 rural subscribers in Calhoun and Orangeburg counties. The completed system will consist of 191 miles of line and three exchanges of which Creston and St. Matthews are in operation serving approximately 800 subscribers. G. M. Northington is president and R. F. Nickels is manager of St. Matthews Tel. Co.

● Hendricks Telephone Corp., Clayton, Ind.; $522,000 loan, to improve and extend rural telephone service in Hendricks, Morgan and Putnam counties. The new borrower proposes to use the loan funds to improve service for its 904 existing subscribers and to furnish initial service to 577 farm families. Garland B. Foscue is president and manager of the Hendricks Telephone Corp.

● Vandalia (Mo.) Telephone Co.; $577,000 loan. The new borrower plans to improve service for its 1,258 current subscribers and provide initial service to 151 farm families. The company is presently furnishing common battery and magneto service over 44 miles of line. Wayne Scott is president & manager of the Vandalia Tel. Co.

● Marianna & Scenery Hill Tele-

phone Co., Marianna, Pa.; $523,000 loan, to improve service for 870 existing subscribers and to furnish initial service to 447 rural subscribers in Washington county. Russell J. Horne is president and manager of the Marianna & Scenery Hill Telephone Co.

Annual Reports Tell Major Problem — Increased Revenues vs. Lower Earnings

● Chesapeake & Potomac Telephone Co. of the District of Columbia spent $14,200,000 on new construction last year, and had a net increase of about 12,000 telephones to bring the number in service at the end of the year to 579,300. Plant investment at the end of 1957 totaled $161,200,000, up 6.9% over the end of 1956.

Operating revenues last year totaled $58,267,008, compared with $56,639,722 in 1956; operating expenses amounted to $40,560,525 last year, and $39,489,321 in the previous 12-month period; and net income in 1957 of $6,896,503, compared with $6,580,678 in 1956.

● ROCHESTER (N. Y.) Telephone Corp. reported net earnings of $2,061,832 or $1.33 a share on 1,171,874 shares of common stock outstanding in 1957, compared with $1,968,649 or $1.62 a share on 976,562 shares in the prior year. Operating revenues last year rose to $21,474,317 from $20,534,211 in 1956.

Due to rising costs, Rochester Telephone last month petitioned the New York State Public Service Commission for an increase in local service rates which it is estimated will produce additional gross revenues of $2,100,000.

● A net income of $256,000, down $96,000 from the previous year, is shown in the annual report of the Northwest Telephone Co., a subsidiary of the British Columbia Telephone Co.

Total operating revenues rose to $2,821,000 in 1957, compared with $2,417,000 for 1956; operating expenses amounted to $2,394,000 last year, against $1,978,000 for the previous year.

● Demand for telephone service continued at a strong pace during 1957 in the nine states served by Southern Bell Telephone & Telegraph Co., and at the end of the year the company served more than 5,830,000 telephones, an increase of about 472,000 over 1956, President Ben S. Gilmer noted in the annual report issued last month.

"The volume of traffic handled by our offices during 1957 was greater than for any previous year," the report stated. "Our customers made nearly 900,000 long distance calls in the average day during 1957; they made over 37,000,000 local calls."

The company spent $297,000,000 in 1957 in a construction program that included completion of 77 new buildings, placing of 3,296,000 miles of wire, and the addition of 2873 long distance circuits. By the end of the year, the total cost of telephone plant was $1,988,205,000.

Operating revenues totaled $651,509,233 last year, compared with $584,219,399 in 1956; operating expenses in 1957 were $421,056,129, and $385,214,841 the year before; and net income was $85,188,176 in 1957, and $73,155,004 in 1956.

● The annual report of the New York Telephone Co. shows that construction expenditures last year were at the record total of $285,879,000, while the comparable 1940 figure was $32,922,000, and gross investment in plant at the end of last year amounted to $2,447,712,000, while the 1940 figure was $808,950,000.

Operating revenues in 1940 amounted to $218,735,000 and last year they were $882,181,000, while operating expenses rose from the 1940 figure of $141,894,000, to $595,617,000 in 1957, including operating taxes of $183,299,000 in 1957, against $40,014,000 in 1940. Taxes per average telephone were $17.21 in 1940, and $37.84 in 1957. The company's wage bill was $446,403,000 in

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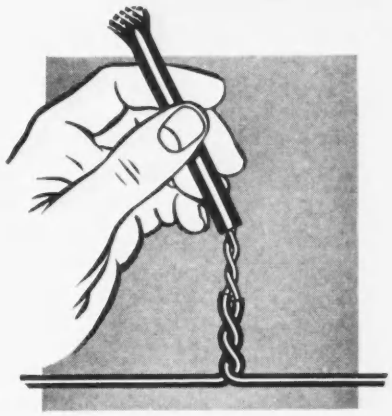

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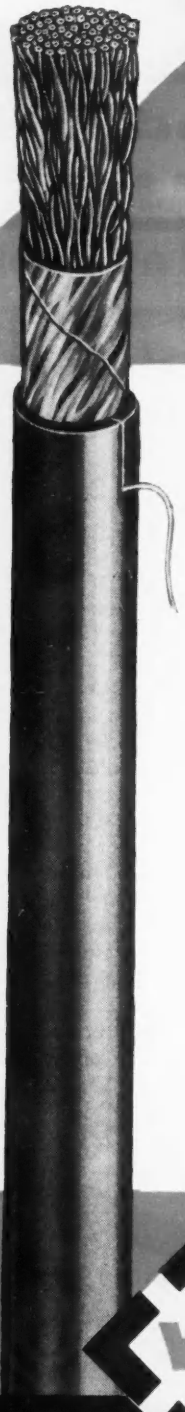

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1957, and $100,046,000 in 1940.

The company's average capital in the pre-World War II year was $585,351,000, and $1,721,625,000 last year. Income available for interest and dividends in 1940 was $38,865,000, compared with $106,226,000 last year, but the per cent earned on capital declined from 6.64% in 1940, to 6.17% in 1957.

Also declining was net income per share. The 1940 total of $34,429,000 was equal to $8.17 per share, while the 1957 total of $87,105,000 was $8.06 per share.

● For the third straight year, Pacific Telephone & Telegraph Co. carried out a record construction program in 1957, spending $424,000,000 to expand and improve service, with part of this total covered by another record figure, $272,169,300, representing the company's financing program, President Mark R. Sullivan pointed out in his annual report to stockholders.

With an increase of 385,000 telephones during the year, the company had 6,652,906 in service at the end of 1957, with about 1,200,000 of this total now connected to direct-distance-dialing networks. During the year, the report noted, 38 central offices and 113,209 telephones were converted to dial, with the result 97.6% of all Pacific company telephones are now dial-operated.

Although revenues were higher than in 1956, Mr. Sullivan said, expenses, taxes, and investment also rose, with the net result that earnings declined 98 cents per share to $8.59 for the year.

Operating revenues last year totaled $863,857,276, compared with $791,561,614 in 1956; operating expenses amounted to $584,565,087 and $532,167,736, respectively; and operating taxes totaled $162,091,843 and $150,323,324. Net income last year was $95,712,962, while in 1956 the total was $90,551,788.

People In The News

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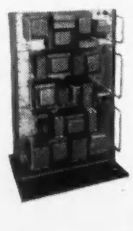
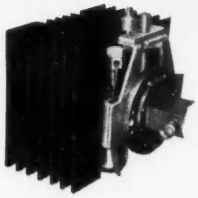


Heavy-duty, tubeless power supplies increase reliability by employing semiconductor rectifiers —assures maximum reliability and minimum maintenance.



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Philco's new CLR-9 microwave equipment provides high channel density, duplex communications with integrated standby facilities for maximum system reliability. It is designed for quick installation in standard relay racks . . . and engineered with built-in metering and test facilities plus plug-in chassis for easy field maintenance.

Performance reliability is sharply increased in the new CLR-9 by the use of tubeless power supplies—new semiconductor rectifiers replace tubes. The use of printed wiring panels increases circuit stability—and complete plug-in chassis may be quickly removed by maintenance personnel (permits efficient, centralized depot maintenance). Klystrons in the new CLR-9 are cooled by convection . . . the use of compact heat sinks eliminates the need for bulky blowers.

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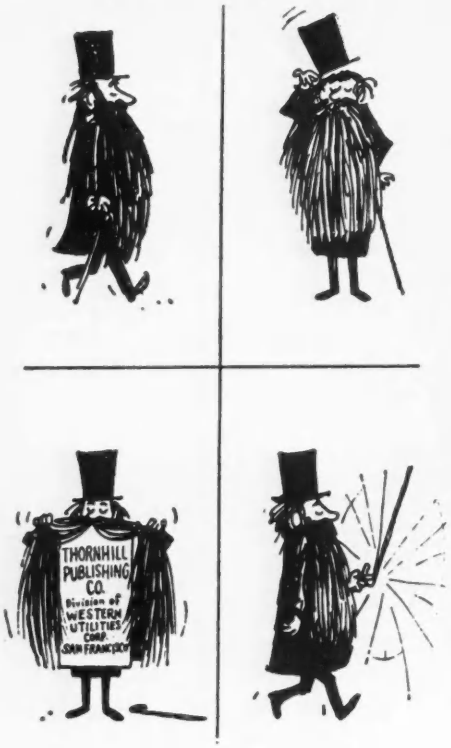

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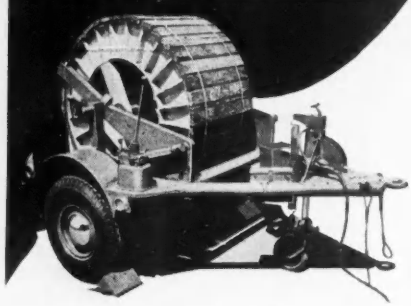

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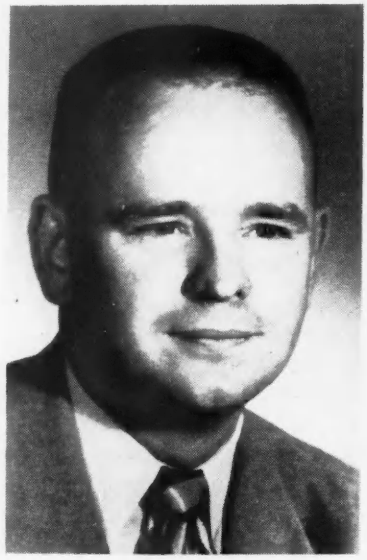


B. J. LOVITT

LEO A. BIRCH

ted and transferred to positions with the General Telephone Service Corp., New York City.

Lovitt, former construction program engineer-senior supervising in the general engineering department, assumed the newly created position of exchange plant engineer in New York on March 1. On the same date, Leo A. Birch, former northern division traffic superintendent, assumed his position as traffic administrator.

With General since 1949, Lovitt has held varied positions in the engineering department. He attended grammar and high school in Santa Monica, later attending that city's college.

Birch joined General in 1950 as a storeman in Santa Maria. He later held numerous positions in the company's general traffic department in Santa Monica before assuming his northern division assignment.

G. W. Wopat has assumed Lovitt's position of construction program engineer-senior supervising and James M. Jordan, former northern division traffic coordinator, has replaced Birch as traffic superintendent for that division, Barnes stated in conclusion.

Robert E. Joslin

W. R. JARMON, president of General Telephone Co. of the Northwest, has announced the appointment of Robert E. Joslin to general commercial manager.

Joslin was formerly the business office administrator at General Telephone Service Corp., New York City. Before going to New York he was special studies supervisor for General Telephone Co. of Calif.

Robert I. Barnes

ROBERT I. BARNES became general commercial supervisor of the Midwest Companies of General Telephone System which include General Telephone Co. of Iowa, General Telephone Co. of Missouri and General Telephone Co. of Nebraska on April 1.

Barnes, a native of Columbia, Mo., was graduated from the University of Missouri. He began his employment with the Missouri Telephone Co. in November, 1950 and held positions in the commercial and traffic departments. In March, 1955, he was named commercial staff assistant in the Union Telephone Co. He has been division commercial supervisor of General Telephone Co. of Michigan since 1956.

Harrod A. Bolds

CLARE E. WILLIAMS, president of the General Telephone Co. of Ohio, has announced that Harrod A. Bolds has arrived in Marion to assume the duties of general traffic manager succeeding Robert E. Coffman who was recently transferred to General Telephone Co. of Mich.

Bolds started his telephone career in 1929 as a switchman with the former Home Telephone & Telegraph Co. in Indiana. Since then he has served in various positions with the company, including that of assistant

HARROD A. BOLDS

equipment supervisor and traffic supervisor. He held his previous position of traffic supervisor since January, 1957, shortly after the Home company was merged with General.

Property Transfers

● The New York Public Service Commission authorized Morris E. Stiles, doing business as Willamstown Telephone Co., to transfer ownership of that firm to Williamstown Telephone Co., Inc. In exchange for the plant, Stiles is to receive 130 shares of $100 par value 5% preferred stock in the new corporation plus a cash payment of $5,000. The new corporation will also issue 50 shares of common stock which will be sold to H. G. Ceratt, Inc., for $5,000. The Ceratt company operates primarily as a telephone plant construction and maintenance contractor.

Williamstown Telephone provides service in the Town of Williamstown and in parts of the towns of Florence, Camden and Amboy in Oswego and Oneida counties. When Stiles acquired ownership of it in 1952, the company was serving about 100 subscribers. It is now providing service to about 200 telephone stations through a magneto-operated switchboard.

● The New York Public Service Commission authorized Herbert O. Lewis and Dorothy S. Lewis, doing business as Crown Point Telephone Co., to transfer their operating plant and equipment to Crown Point Telephone Corp.

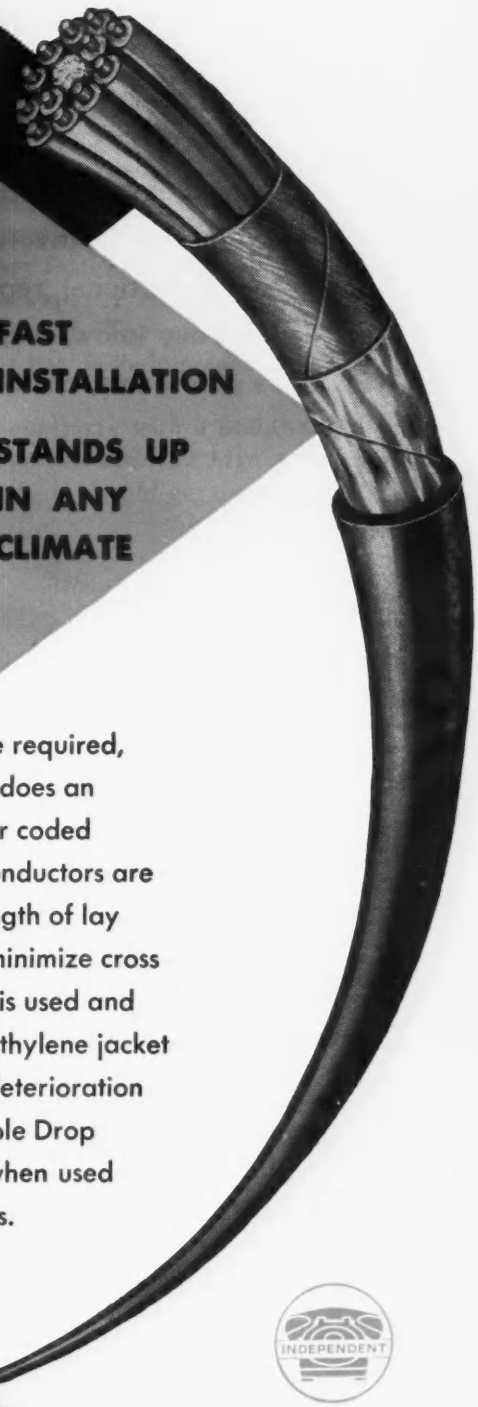
WHITNEY BLAKE

SELF SUPPORTING

Multiple Drop Cable

FAST INSTALLATION

STANDS UP IN ANY CLIMATE



Where multiple drops are required, WB Multiple Drop Cable does an outstanding job. The color coded polyethylene insulated conductors are twisted into pairs with length of lay systematically varied to minimize cross talk. An aluminum shield is used and a special WB black polyethylene jacket protects the whole from deterioration in any climate. WB Multiple Drop Cable is self supporting when used with spiral type deadends.

INDEPENDENT

WB

6-8

WELL BUILT WIRES SINCE 1899

WHITNEY BLAKE COMPANY

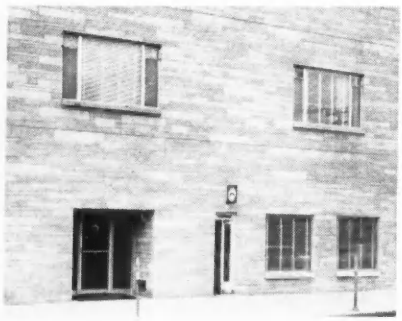
NEW HAVEN 14, CONNECTICUT

Leadership

in cable design,

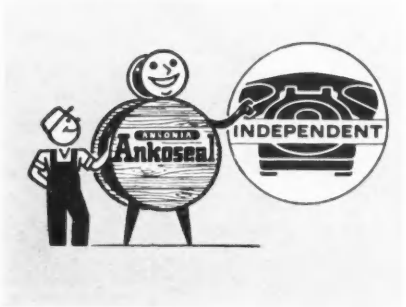
quality and service

. . . these are the reasons why so many independent telephone companies look to Ansonia for guidance whenever wire and cable is involved. They know that Ansonia Wire & Cable Company has earned a national reputation for assisting independents in solving local problems. They know, too, that they can depend on Ansonia Ankoseal Cables for years of low cost, trouble-free service.



Typical of these progressive independents is C. T. & N. Telephone Company, of Casey, Illinois. For years it had experienced many types and quantities of cable troubles — fires, tornadoes, sleet storms, bullet holes, cable ring cuts, power wire contacts, etc. The decision was made to put cables underground. Today, with 300,000 feet installed, C. T. & N. estimates it has reduced maintenance costs by 90%. The cable C. T. & N. selected was Ansonia Ankoseal Cable.

Of Ankoseal Cable, Mr. O. A. Logue, President of C. T. & N., reports: "With six small exchanges totaling 4,700 stations, all with dial service, our cables have to be good — 48 volts will soon show up any cable which isn't up to snuff. Ankoseal Cable is easy for cable men to install — terminals can be connected with a minimum of effort and splicing is much easier".



When you have a cable problem, take advantage of Ansonia's leadership in cable design, quality and service. Contact your nearby authorized Telephone Supply Distributor.

The Ansonia Wire & Cable Company
111 Martin Street, Ashton 3, Rhode Island

210-8

EDITORIAL

"Headlines Do Backfire"

WE WILL go along with records which prove one major part of the telephone industry's story for 1957 mainly concerned itself with *growth*. That portion of the story was given headline treatment by the newspapers in the large and the small towns throughout '57, and it received feature news treatment at year's end when telephone companies summarized their activities for the year.

Admittedly the growth stories made good reading. Our field reporters flooded us with newspaper clippings — *the kind that emphasized growth here and growth there in headlines and lead paragraphs* but in many cases skipped over or omitted the fact *that earnings of several companies were low because rates were completely inadequate to sustain earnings at satisfactory levels.*

Now we have no argument with news stories that accent the good. We like to publish such stories ourselves. But a long time ago we learned readers are "headline scanners" and the meat of a story had better be in the lead paragraph or the reader will miss it entirely.

And to us the real meat of stories on operations of U. S. telephone companies during 1957 was not the high construction expenditures that brought new and improved service to telephone users.

We believe the real meat of the industry's 1957 story concerns itself with the fact that *despite the enormous growth in capital investment, revenues, telephones in service, etc., the inability of many companies to adjust telephone rates to meeting rising costs resulted in declining earnings.*

That part of the industry's 1957 story, was either buried or omitted from most of the news stories we have received. And we consider it an unfortunate error of omission.

We say this because newspaper clippings now crossing our desk indicate many newspaper readers read the headlines, noted the telephone company had expanded and improved service at a cost of thousands of dollars, and promptly assumed any company capable of spending so much was making money faster than a U. S. mint!

Current newspaper clippings prove the truth of that statement. For example here are two samples of what is being said by some newspapers: —

(1) "*If a company with a* $68,000,000 *investment can't operate with the high rates it already has then maybe it should get out of the telephone business and let other companies serve us who are expanding on lower rates . . . .*"

(2) "*It is a little preposterous to expect we telephone subscribers to advance the money for the company to expand and pay the stockholders also . . .*"

Today, such statements are appearing in many newspapers. Since the middle of February our editors have accumulated nearly 100 clippings — all from papers serving towns where the telephone company has been forced to seek commission approval of increased rates.

The quantity and the general tone of some news stories and editorials indicates, we believe, a definite need for telephone industry members to revamp their own publicity methods.

Certainly the records prove the accent on most publicity has been on growth of this and growth of that which acts to make all customers believe their telephone company is making a handsome profit.

There is a need, we believe, for more publicity that will acquaint telephone users with *the fact that a big year constructionwise and revenuewise is not necessarily a big year profitwise for a telephone company.*

Somehow the exact formula for accomplishing that task must be found. If it isn't found, we feel sure headlines that tell what a big growth year a company had, will keep up the present pattern of *backfiring* when the company makes its bid for a rate increase.

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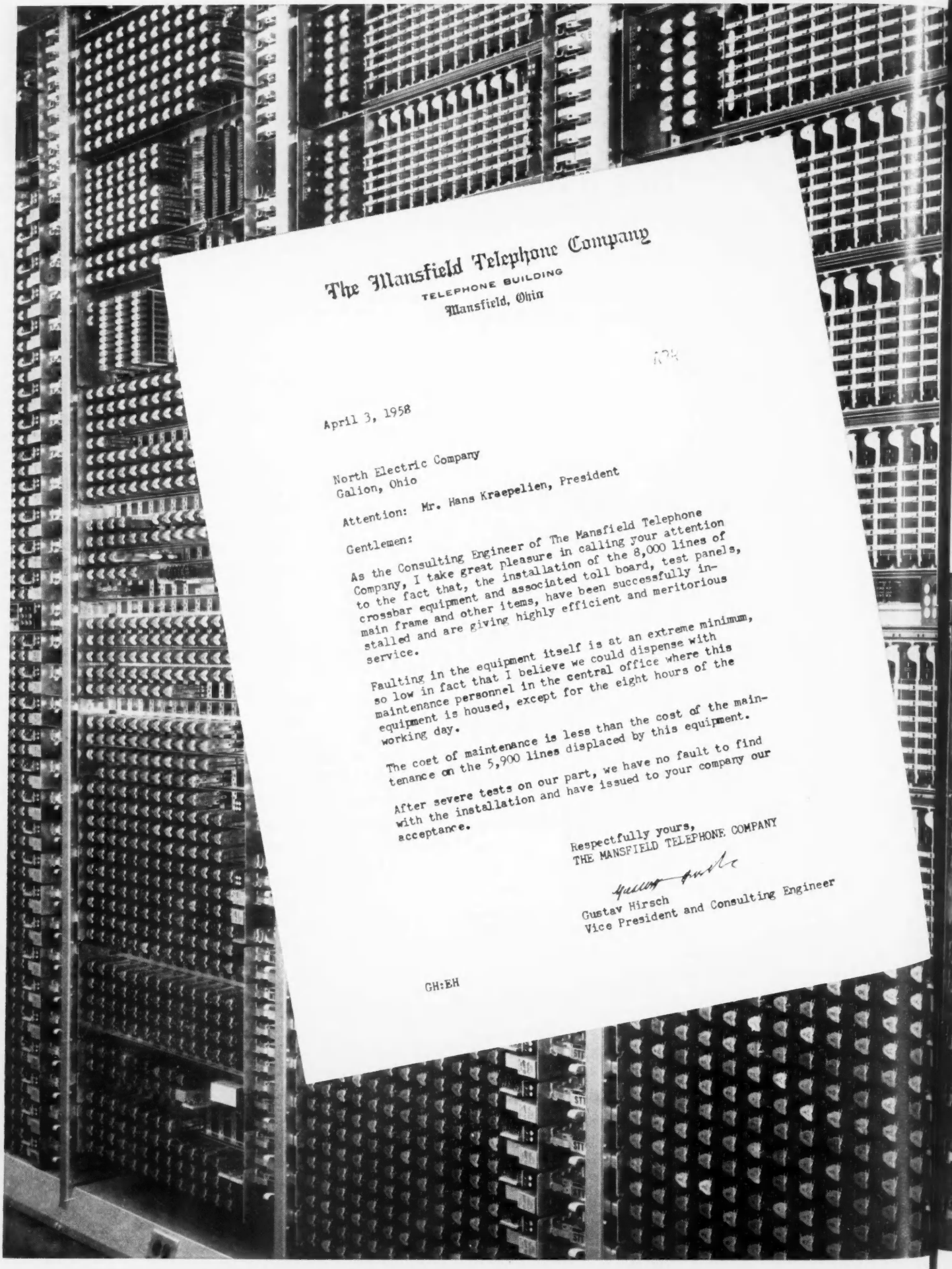


The Mansfield Telephone Company
TELEPHONE BUILDING
Mansfield, Ohio

April 3, 1958

North Electric Company
Galion, Ohio

Attention: Mr. Hans Kraepelien, President

Gentlemen:

As the Consulting Engineer of The Mansfield Telephone Company, I take great pleasure in calling your attention to the fact that, the installation of the 8,000 lines of crossbar equipment and associated toll board, test panels, main frame and other items, have been successfully installed and are giving highly efficient and meritorious service.

Faulting in the equipment itself is at an extreme minimum, so low in fact that I believe we could dispense with maintenance personnel in the central office where this equipment is housed, except for the eight hours of the working day.

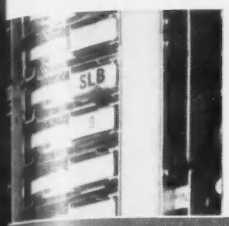
The cost of maintenance is less than the cost of the maintenance on the 5,900 lines displaced by this equipment.

After severe tests on our part, we have no fault to find with the installation and have issued to your company our acceptance.

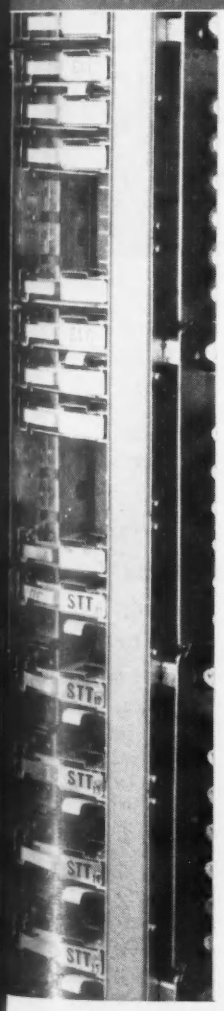
Respectfully yours,
THE MANSFIELD TELEPHONE COMPANY

Gustav Hirsch
Vice President and Consulting Engineer

GH:EH



INDUSTRY LEADER PRAISES **NORTH BY-PATH CROSSBAR**



Mr. Gustav Hirsch has been a leading telephone authority since the year 1900. As president of the world-renowned Gustav Hirsch Organization, Inc. in Columbus, Ohio, Mr. Hirsch has directed the activities of one of America's largest telephone engineering and construction firms.

Playing a vital role in the engineering and installation of all types of telephone equipment throughout the world, Mr. Hirsch and his Organization have contributed much to the progress of the Independent Telephone Industry.

Capably serving the industry in many important capacities, Mr. Hirsch is also vice president of The Mansfield Telephone Company, one of the largest independent telephone companies in the nation. Last June 1 this progressive company converted to North Electric's Crossbar equipment.

NORTH ELECTRIC COMPANY

655 SOUTH MARKET STREET • GALION, OHIO

For 25-year telephone battery life—

always install C&D PlastiCal®

Why? Because C & D PlastiCal® batteries are the most advanced-design batteries of the last 50 years.

PlastiCal lead-calcium alloy grids are completely free from the harmful life-shortening effects of antimony found in conventional telephone batteries. By comparison, a C & D PlastiCal requires from 1/10th to 1/100th the current to maintain itself in a fully charged condition. Thus, frequency of water additions is drastically reduced.

A PlastiCal in the battery room means you can check the electrolyte level by glancing at the clear plastic case. Patented, exclusive C & D Saftee-Vents reduce maintenance by serving as always-ready, efficient funnels for temperature and hydrometer readings—*without* removing the vent.

If you need telephone batteries—a C & D representative or your telephone equipment supplier will be glad to explain the many advantages gained by installing C & D's premium telephone battery—PlastiCal. *Call him today!*

For details, write for descriptive Bulletin

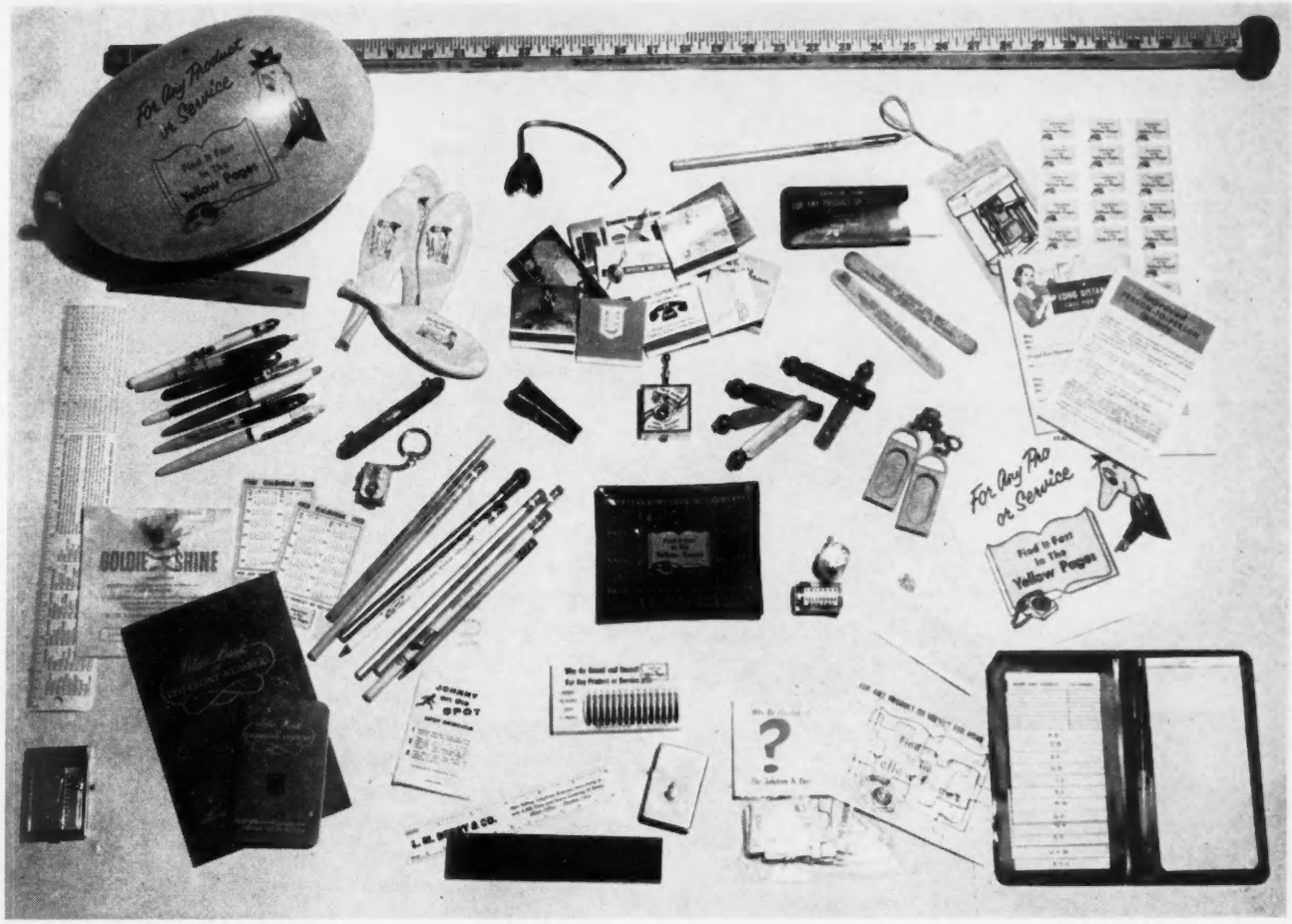
C&D BATTERIES, INC.

of Conshohocken, Pa. ... Attica, Ind.

SINCE 1906

SALES AND SERVICE OFFICES IN PRINCIPAL CITIES FROM COAST TO COAST

Manufacturers of *Slyver-Clad* ® Industrial Batteries • PLASTICELL and PLASTICAL® Batteries for Communications, Control and Auxiliary Power


For Any Product or Service
Find It Fast in The Yellow Pages
GOLDIE SHINE
For Any Pro or Service
Find It Fast in The Yellow Pages

Inexpensive "give-away" items build good will and help promote the sale of special services. Pictured above are only a few of the more popular items available, including book matches, pencils, plastic dialers, rulers, balloons, puzzles, candy mints, ash trays, and calendars.

"Gimmicks, Gadgets and Give-Aways"

By F. J. EHERENMAN*

"The potential telephone customer must be constantly reminded that the service he reads about is available from his local company."

THERE was a time in the telephone business when it was not uncommon to find two or more telephone companies in active competition with each other in the same community. Times have changed, of course, and exchange boundaries now are quite well-defined so that the telephone business is referred to as a "regulated monopoly," the term implying there is no longer any competition involved. Our customers, at least, have this impression, and, unfortunately, many telephone people share the same opinion.

Yet, in a very real sense, the telephone company has competitors everywhere within and beyond its exchange boundaries.

Telephone customers, real and potential, have two kinds of dollars in their pockets, "necessity dollars" and "discretionary dollars." Necessity dollars obviously, go for basic, immediate needs such as food, clothing, shelter, electric power, fuel, water, and, in most cases, at least a minimum grade of telephone service. Discretionary dollars, on the other hand, are those that are left over after the necessity dollars have been expended.

Regardless of recurring news stories of unemployment and business recession; the fact remains that the average American today has four to five times as many

*Mr. Eherenman is general commercial supervisor, United Telephone Co., Inc., Warsaw, Ind.

discretionary dollars in his pocket as he had just prior to World War II. Moreover, being an average American, he probably will not place all of his discretionary dollars in investments or in savings accounts. Instead, Mr. and Mrs. America have a reputation for putting their discretionary dollars into consumer items that will give them and their families added comfort, convenience, prestige, or pleasure.

This is where the telephone company's competition arises. To maintain or improve the percentage of discretionary dollars going to the telephone company, the telephone company must sell "extra" services in

"Open House" functions are excellent "gimmicks." Here, visitors to the Warsaw, Indiana, dial exchange line up to sign the guest book and receive a number of "give-aways" plus, of course, plenty of promotion literature.

active competition with other businesses who are scrambling for the same dollars.

For its share of the consumer's discretionary dollars, the telephone company must compete, for instance, with the corner drug store that sells everything from greeting cards to power lawn mowers; with milady's dress shop where women's styles become obsolete overnight; and with the television store down the street where anyone with a job can get a 1958 color set with little or no money down and 36 easy months to pay the balance.

What's worse, the telephone company's competitors, in most cases, have the power of nation-wide promotional campaigns working for them. On New York's Madison Avenue and, in fact, on Advertising Row in dozens of cities throughout the country, those men in grey flannel suits are engaging in daily brainstorming sessions, producing ideas that will extract those discretionary dollars from the consumer's pockets and deposit them in their clients' cash registers. These ideas, converted into sales promotion campaigns with the help of highly-paid psychologists, are bombarding the potential consumer every hour of the day and night through the media of television, radio, newspapers, magazines, billboards, the U. S. mails, and even sometimes by telephone.

"Services Won't Sell Themselves"

THE TELEPHONE company's salvation, then, is to convince the consumer that monthly charges for extra telephone services are more important than monthly payments on, for instance, an automatic dish washer. Extra telephone services that bring extra revenues just won't sell themselves; in this day and age the telephone company has to make a sales effort or else lose out completely to more aggressive competitors in the quest for the limited number of discretionary dollars available.

But what small, Independent telephone company can hope to compete with the nation-wide, high-pressure selling methods of the market researchers, symbol manipulators, psychologists, and sociological consultants? How many telephone companies can afford the advertising budget of Westinghouse or General Motors?

Fortunately, the success of a telephone company's sales promotion effort does not depend necessarily upon the amount of money expended. Moreover, since the telephone company's promotion efforts are not nation-wide, the telephone company enjoys a decided advantage over the grey-clad desciples of Mass Motivation. The telephone company's customers are located within a limited geographical area, and the ability to concentrate effort on likely local prospects brings greater results per dollar spent.

In fact, "localization" is the basic premise to stress in any telephone company's promotion campaign.

Actually, telephone companies are not without nation-wide advertising. The Bell System's television shows, radio spots, and magazine ads help to keep the consumer telephone-conscious. The General System and USITA also use national publications to the extent that all telephone companies derive a certain amount of benefit.

However, the potential telephone customer has to be reminded over and over again that the telephone services he reads about in his favorite magazine are available at his local exchange business office. The Telephone Advertising Institute people, who supply excellent newspaper ads, radio announcements, posters, counter cards, and other printed advertising material to Independent telephone companies, are ardent advocates of the "localization" angle in the use of their materials.

"Gimmicks Play A Part"

IT IS not our intent here to explain how a complete sales promotion campaign should be set up and conducted. Rather, we will consider some of the tools of sales promotion, particularly "gimmicks," gadgets," and "give-aways," because they are seldom — discussed media that play an important part in the "localization" of sales promotion efforts.

A "gimmick" is difficult to define, because it is basically an intangible. A gimmick can be a slogan, an insignia, a symbol, or only an idea. Call it a trick, if you like, that will trigger the potential customer's mental processes toward a favorable reaction to a product or service.

Here's an example of a gimmick that more than one telephone company is using as part of their efforts to increase use of toll service. The gimmick is nothing more than a small card on which is printed the simple question, "Have You Called Home?" The cards are placed on dressers and telephone stands in motel and hotel rooms in the exchange area.

Some companies have printed the question on a calendar blotter for the writing desk while others use a small decal which, with the co-operation of the management, is placed on the mirror of the cabinet in the bathroom. So stated, this simple question implies that calling home is something that everyone is expected to do and that long distance facilities are readily available.

While there is no way to measure its effectiveness, of course, it is believed that this gimmick, merely a printed suggestion, needles many a lonely, nostalgic traveler into making toll calls that otherwise never would have been placed. And that means profits for the telephone company that otherwise might not be realized.

Then there is the story of a telephone company whose gimmick involved the sponsoring of one of their operators in a local beauty contest which coincided with the start of a directory advertising sales canvas. Participating under the title of "Miss Yellow Pages," the telephone company entrant won the contest. Later, the operator assisted in the sales canvas by making sales contacts by telephone, beginning the conversation by introducing herself as "Miss Yellow Pages." Flattered business men, influenced by local publicity regarding the contest, bought directory advertising as never before.

"*Attract The Shoppers*"

WINDOW or counter displays of extra service items in the exchange office are nothing more than simple gimmicks, but sometimes the extra service items attract more attention if they are displayed somewhere other than the telephone office. Window decorators in department stores, furniture stores, and paint shops are always interested in novel props, and they usually are more than willing to make use of a colored telephone that will enhance their own displays. When window-shoppers see colored telephones in all their favorite store windows, some of them are bound to decide that they want one or more colored telephones.

It's fine if the telephone company has a window of its own to use for display purposes, but the opportunity of using a competitor's windows for telephone displays should not be overlooked. It's a sneaky gimmick, perhaps, but most successful and, actually, mutually advantageous.

KAY CRAIG'S jewelry consists of a number of telephone "gadgets," including earrings, pins, a charm bracelet, and a sweater guard. On her dressing table are a ceramic bank, a desk pen, silent butler, address file, cuff links, compact, and key chains, all with a telephone motive. The umbrella in the background is covered with a colorful telephone print.

Sometimes a special service for a customer is also a gimmick for the telephone company. Time Announcement Service, for instance, can be sold profitably to one or a number of customers. The very fact that such service is in existence creates a favorable attitude toward the telephone company as well as the sponsoring customer. Favorable attitudes help sell additional services.

"Open House" activities at the exchange office or the increasingly-popular "Home Shows" are excellent public relations functions. More than that, however, they are gimmicks for getting a select group of already-interested people in one spot where they may be exposed to either subtle or obvious sales pitches.

An added gimmick on such occasions can be a drawing for door prizes for adults who have signed a card, indicating an interest in certain extra telephone services. The cards, of course, are used for follow-up sales contacts after the "Open House" or "Home Show" is over.

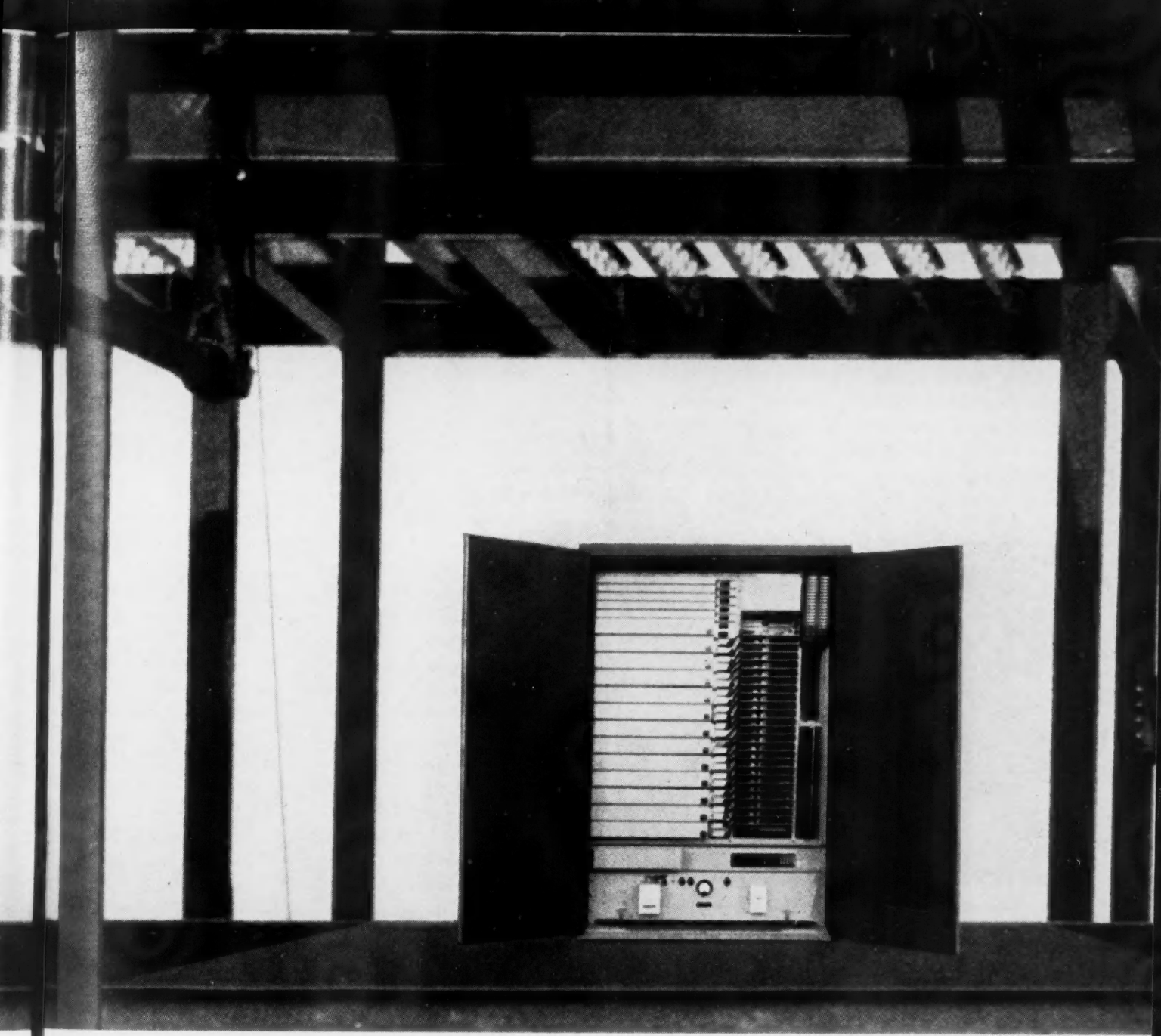
As a suggestion, a number of free, three-minute telephone calls to any point in the United States are prizes attractive enough to encourage a great number of adults to sign up for the drawing. Moreover, this kind of a prize undoubtedly creates an appreciation of long distance service in the minds of all contestants and conceivably could be the impetus for a greater use of paid long distance service.

"*Give-Aways*" *Promote Sales*

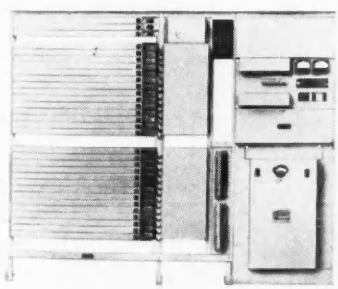
NOT EVERYONE can win a prize, however, and it would be wise on these occasions and others to have some kind of a gift for everyone. This brings us to subject of "give-aways".

"Give-aways" are those small, tangible items that bear a stated or implied advertising message. To be appreciated, give-aways should be practical, novel, or

● REVENUE BUILDERS...The heart of an industrial, institutional or commercial building is its communications system. These dial PBX's by Stromberg-Carlson -- the F-40 and F-80 -- meet the needs of a wide range of subscribers. The F-40 is small, compact, quiet in operation. You can easily roll it anywhere, place



it where you like, because it's styled as modern office furniture. The F-80, with its larger capacity, is



ideal for your bigger commercial subscribers. For details consult your Stromberg-Carlson representative.

STROMBERG-CARLSON A DIVISION OF GENERAL DYNAMICS CORPORATION

ELECTRONIC AND COMMUNICATION PRODUCTS FOR HOME, INDUSTRY AND DEFENSE

ingenious. They should be small enough to carry around in the pocket or purse, and they need not be expensive. Their advantages are that they are a more personal means of sales promotion and that the sales message is seen over and over again without added cost to the telephone company. Radio and television advertisers must pay for valuable repetition. Give-away advertisers get it free.

Take match books, for example. Almost everyone needs them and uses them. Before the matches are used up, almost everyone notices the advertising message more than one time. It's obvious that matchbooks are an economical, effective sales promotion item, because so many advertisers use them. Telephone companies need not be an exception.

There's a lot of mileage, too, in pencils that carry an advertising message. The recipient may have a number

Many business houses are eager to use telephones as window display props. In the picture above, a red handset was used in a department store's Valentine display.

of other pencils in his desk drawer, but, if the telephone company's pencil is of good quality, it will be selected in preference to many others. And in selecting it, the user is certain to be exposed again to the sales message.

Yes, it takes very little to make a potential customer happy, and telephone companies can concentrate, localize, and even personalize their sales promotion efforts through the distribution of give-away items over the business office counter or at "Open Houses," "Home Shows," and public gatherings of all kinds.

Gadgets Promote Plus Sales

PERHAPS, however, there are certain people who deserve a better memento than the general public receives. In such cases, telephone companies are wise to hand out a "gadget" to the right person at the right time.

"Gadgets" are nothing more than "give-aways" except that they cost a little more and ordinarily do not carry a printed advertising message except, perhaps, a company name. Offering a gadget as a subtle bribe is never recommended, but giving away a gadget as a token of gratitude for past favors may very well promote extra telephone sales in the future. It's not the gift but the principle of the gift that's important.

For instance, to express the telephone company's appreciation for an industrial customer's business, the customer might be given a pen with an ink well in the form of a miniature telephone. Such a gadget is available, and the fancier ink wells are also music boxes that play a familiar tune when actuated. Corny? Perhaps, but nevertheless appreciated if for nothing more than their novelty.

Other gadgets include such items as toy telephone trucks; charm bracelets with tiny telephones attached, pill boxes; wallets; telephone pins and earrings; ladies compacts that look like telephone dials; and a host of other items with a telephone motif.

Incidentally, such gadgets make inexpensive, extra gifts for the retiring employe or perhaps for telephone personnel who have done an especially good job in the promotion of telephone sales.

As in all things, however, a job worth doing is worth doing well. In the use of gimmicks, gadgets, and give-aways, too, quality is of primary consideration.

Advertising specialists, who are in a position to know, maintain that customer buying is an emotional function. Among other things, this means that the potential customer's need for the product often becomes secondary to the customer's subconscious attitude toward the manufacturer. It behooves the telephone company, then, to establish itself in the customer mind as a solid, substantial institution, friendly and general but business-like in nature and with the desire and ability to provide an excellent grade of service.

Therefore, the quality of the promotional schemes must reflect and enhance the mental image that is to be planted in the customer's subconscious. A potential customer who received free a book of popping, sputtering matches or a smeary, clogging ball point pen will form an unfavorable attitude toward the sales-promotion item. This attitude is quite likely to be transferred to the very product or service that is being promoted. Good taste and good quality in gimmicks, gadgets, and give-aways cost very little more than poor taste and poor quality and provide greater dividends in the long run.

We have been able to touch upon a few promotional items here. There are many more, and their use and distribution is limited only by the imagination and financial resources of the telephone company. Gimmicks, gadgets, and give-aways are not intended to replace such established promotional media as newspaper ads, posters, bill inserts, and such forms of the printed and spoken word. Instead, they should be used as supplements to these media to localize and personalize the sales promotion efforts.

After all, the best advertising in the world is word-of-mouth advertising, and nothing encourages one-man-telling-another as much as a successful combination of the use of gimmicks, gadgets, and give-aways.—*F. J. Eberenman.*

ALL NEW!

WORK BULL 202 and DAVIS LOADER-BACKHOE

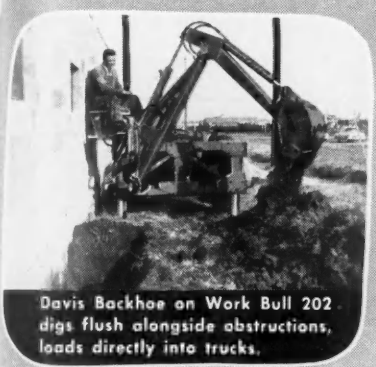
BEST POWER-MATCHED EQUIPMENT UTILITY COMPANIES CAN BUY!

Here, at last, is a powerful industrial tractor, loader, and backhoe designed and integrated to each other. They work together as a single unit that is unsurpassed for lowering utility line construction and maintenance costs!

The all-new Work Bull 202 Tractor has low-silhouette styling, full-time power steering, dual-range, multi-speed transmission plus many other features to increase your on-the-job efficiency. High-torque 40 h. p. engine delivers more sure-footed lugging power at low speeds than any other tractor in the utility class.

Look how the Davis Loader is matched to the Work Bull. Tractor has built-in mounting to eliminate necessity for bumper. Assures easy installation and service – plus greater reach out front. Scarifier, Fork Lift, Landscape Bucket, Angle Dozer, and Crane attachments provide quick-change versatility.

The Davis Backhoe – the only machine in the world that can flush-dig alongside obstructions as well as handle normal digging assignments – features 10,000 pounds of breakaway and exclusive seat that swings with the boom so operator always faces his work. Five-minute detachability simplifies mounting Massey-Ferguson Power-Matched attachments such as the Cable Layer, Tipping Trailer, Cordwood Saw, Post Hole Digger, Side-Mounted Mower, Wagon Chassis, Auburn Trencher, and others.



Davis Backhoe on Work Bull 202 digs flush alongside obstructions, loads directly into trucks.

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Work Bull 202 and Auburn Trencher with hydraulic drive digs at speeds up to 600 feet per hour!

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Joint buried installation at Olympia Fields, Illinois. At left is the telephone terminal; at right is transformer housing used with buried power service.

Buried telephone and power service distribution in housing development at LaGrange, Illinois. Note buried transformers and telephone pedestals along rear lot line.

The All-Buried Telephone Service Concept

By JOHN S. REED

Part II of a report on experiences of several telephone companies with underground cable and wire tells what is being done to accelerate the ultimate application of the buried telephone service concept.

Bell System Experiences with Buried Rural Telephone Distribution Systems[4]

IN 1952 the Michigan Bell Telephone Company successfully placed some 100 miles of 6-pair, 19 gauge aluminum polyethylene sheathed cable with polyethylene insulated conductors (PIC cable) in light soil, using a wire-laying plow drawn by a line construction truck. In the same year, the Southwestern Bell Telephone Company began an extensive cable plowing program using lead sheathed, tape armored cable. In spite of the heavy soil conditions in the area, the Southwestern Bell was able to reduce plowing costs for cable laying from 12½ cents per foot in 1952 to 5½ cents per foot in 1954.

As a result of the experiences of these companies, the Southern Bell Telephone and Telegraph Company proceeded in 1954 with a buried distribution program, placing about 25 miles of 1-pair underground wire and four miles of 11-pair 19 gauge PIC cable in a Mississippi location, using a wire and cable plow. The plowing and laying work was handled on a contract basis with telephone company personnel handling the wire and cable terminating work. The cable was terminated at distribution points in standard 6-pair drop wire terminal modified to accommodate PIC cable. Reel ends of the cables were spliced together in the trench by conventional splicing techniques. A 104 mil copper shield wire was buried with the cable for lightning protection.

Experience with the trial installations indicated a need for more efficient plows and less costly terminating facilities to install buried plant at an initial cost competitive with that of comparable aerial plant. The first step in reducing the expense was to eliminate the shield wire in all except high earth resistivity areas, with a substantial cost reduction, because of the high dielectric strength of the polyethylene jacket and conductor insulation.

By employing an experienced contractor who had developed very successful plowing equipment handled by well trained crews, Southern Bell was able to embark on a program of installing buried plant at a bid cost of 5¼ cents per foot for the cable and 4½ cents

per foot for buried wire. The cost was based on a minimum volume of 400 miles at a rate of 80 miles per month or more. Hand digging at offset locations was excluded from the contract and one dollar additional per mile was charged for job moves greater than 150 miles.

The requirement for inexpensive terminating facilities was satisfied by a special design by the Bell Telephone Laboratories of a 6-pair terminal for buried cable distribution. This was a standard weatherproof apparatus

Workman cutting sheath of underground cable preparatory to terminating the cable.

box with a terminal strip used for terminating 6-pair drop wire. This terminal was designed to be mounted on a post for a buried service entrance or on a pole for an aerial drop to the station.

The 6-pair cable was looped through the terminal to provide access to all pairs for terminating and connecting as required, as well as for testing any pair. This method also enabled the connecting together of the reel ends of the cables in a terminal, making it unnecessary to employ skilled cable splicers for splicing cable ends in the trench.

Loading, required by the long lengths of cable involved, was accomplished by employing 88 millihenry loading coils, standard for use with rural distribution wire, but omitting the usual electrical protection. The coils were connected by means of two 6-pair terminal strips in the apparatus box. Two terminal strips without loading coils could also be employed for 11-pair cable. This method was extended to provide 16, 26, and 51 pair terminations by the use of suitable terminal strips in larger apparatus boxes.

A trial was made of these items at Denham Springs, Louisiana where six miles of PIC cable in sizes from 6 to 51-pair were placed 20 inches deep in the roadway of a gravelled claybase state highway.

At each terminal, the plow share was temporarily raised to permit pulling a loop of cable to the terminal at the edge of the right-of-way. After the plow continued on its way, the loop was hand or machine-trenched 36 inches deep across the road shoulder to the terminal. The same method was employed at small bridges and culverts where loops were hand-trenched around and under the obstructions. This enabled the plow train to proceed with minimum interruption, and splicing time was saved at the expense of some excess cable.

This trial proved in the new items and to a large extent determined the construction technique. Since the cost of buried plant compared favorably with that of equivalent aerial plant, the decision was made to employ buried cable and wire wherever practicable to expand rural telephone service. During 1955, over 11,500 rural subscribers in Southern Bell territory who otherwise could not have been accommodated economically, received telephone service from buried cable and wire. To do this required some 1,700 miles of buried cable and 1,300 miles of buried wire, more than 75% of which was placed in Louisiana.

Grass fires are common in the Louisiana region and to prevent damage to the polyethylene jacket and conductor insulation a fire resistant pedestal was developed to enclose the riser cable and contain the terminal. This was a length of Transite flue pipe adapted for use as a pedestal to mount the small 6 and 12-pair terminals and provide a fire resistant enclosure for the exposed riser portions of the cable loops.

For the larger cables a terminal mounted on a steel fence post and housed in Transite pipe was developed. It could be equipped with any of the terminal strips then in use, was fire resistant, and would be inconspicuous in place. This assembly, with a few modifications, appeared to satisfy all requirements for joining reel ends, for loading, and for distribution terminals at buried service entrances. A local manufacturer of sheet metal products produced the terminals at a cost less than the combined cost of the original development terminal and associated wooden post. This new pedestal terminal is used at locations not already having a pole in place or requiring one for aerial drop service to the subscribers' station.

During 1956, and the first six months of 1957, an additional 3,400 miles of buried rural cable and 1,100 miles of buried wire were placed in service in Southern Bell. While this popularity of the buried plant idea was primarily the result of lower initial cost, lower maintenance and fewer service failures were also factors in this acceptance. Failures were mostly of a mechanical nature, largely the result of excavations by non-telephone workmen. One serious case of trouble occurred when a hurricane tidal wave, flooded part of the low Delta portion of Louisiana, flowing over the terminals and filling the core of some 25,000 feet of buried PIC cable. This resulted in failure of some pairs because of occasional pin-holes in the conductor insulation, though service could still be maintained through these cables with some transmission impairment on a few circuits.

Unsuccessful attempts were made to force water from

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Bulletin 202 gives additional data. Write National-Standard, Niles, Michigan.

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these cables with pressurized nitrogen gas, and some of the moisture remained to collect in low places in the cables, causing conductor faults. The Bell Telephone Laboratories came up with a method of removing the remaining water which eliminated air from the core of a cable section by first flushing the cable with nitrogen followed by acetone forced under pressure through the cable to absorb the moisture. The acetone residue was then removed by again flushing with nitrogen. This method took the water out of about 5,000 feet of cable in the sections having the greatest number of conductor faults. The remaining 20,000 feet of cable has contained water for over a year with no pairs in trouble so far reported.

More improvements have been made which permit greater latitude in the choice of construction methods. A high dielectric plastic sleeve, filled with a sealing material of good insulating qualities, was developed which would adequately insulate wire splices without requiring soldered conductor joints. The perfection of a mechanical splice closure along with the plastic sleeve made splicing in the trench feasible. Both splice type and welded steel high dielectric loading coil cases were rendered impervious to moisture, making practicable loading in the trench. Studies indicate that trench splicing and loading of cables containing more than 16 pairs are less expensive than pedestal splicing and loading. While this eliminates accessible full-count test points, this is not considered an important factor because of the fact that some pairs are available for test purposes at intervening distribution terminals.

Southern Bell's use of buried PIC cable and underground wire for rural distribution plant is now well into the third year. Analysis indicate that "in-plant" cost of buried PIC cable is from 15% to 30% less than that of equivalent aerial plant, exclusive of pole line costs. Moreover, plowing has been found feasible in much more difficult terrain than was originally thought possible, and the trouble incidence is very low.

Southern Bell visualizes the eventual decrease of large undertakings as the backlog of rural demand is satisfied. Future jobs will tend more and more to short extensions from the feeder plant now being placed, introducing a need for smaller plowing or trenching equipment for isolated jobs to avoid high investment costs incidental to the use of heavy plow trains.

Buried Service in Urban Locations[2]

THE USE of aerial plant to provide telephone service in cities and towns is much less desirable than in rural districts. The exposed plant is more objectionable from appearance and maintenance standpoints. Moreover, the present day subdivisions with winding roads, blocked streets, irregular lot lines, and lack of alleys make the placing of pole lines more difficult and require the installation of more anchor guys than did the old time grid-like city blocks. The additional poles and line material increase the cost of the aerial plant.

As previously explained, underground cable in conduit has worked well in business districts but is too expensive to place in residential areas. Moreover, it requires the use of risers for aerial service to subscribers, which defeats one purpose of the underground plant, concealment of the entire outside plant.

With excellent results having been obtained in rural installations of buried plant, it is only natural to consider the idea for urban areas as well. The materials have been or are being developed for less expensive buried plant. Yet, conditions in rural districts are not quite the same as in urban areas. The difficulty is that

Trenching for buried service drop from house to main trench. This housing development is near Baltimore, Maryland.

the paved streets; concrete sidewalks and driveways; underground pipes, sewer lines, and similar structures; and small lots do not permit the use of plow trains.

This equipment problem is being solved by the use of small self propelled trenchers which can go through narrow entrances and will not damage lawn turf. Such machines can be driven up to the house to lay the service wire from the main or lateral cable pedestal. The trenchers, of course, should be capable of operating in different kinds of soils of varying consistency from soft and wet to frozen.

The Bell System has been actively working on the problem of providing economical all-buried service in urban areas to meet urgent requirements in new housing areas. Companies in the Bell System have been using newly developed trenchers and trying out various methods. These trial projects were initiated in California, Illinois, Indiana, Maryland, Michigan, Minnesota, New York, and Ohio, among the states selected.

Very promising results have been indicated in certain cases. With favorable soil conditions underground plant has been placed at lower first cost than for aerial construction. It is a different matter to obtain satisfactory low costs where the soil is difficult to work in and conditions of weather and terrain are not favorable for this work. If there is heavy shale or rock, it may not be feasible to bury the plant.

The problem of frost and frozen ground in northern

Transite flue pipe type housing for buried cable terminal installed by Michigan Bell Telephone Company.

Workman connecting buried wire in pedestal cable terminal. Note number of wires to be connected in terminal.

parts of the country, is being attacked by either planning or scheduling of the work to assure that buried plant is installed before the ground freezes, or by improving the trenching equipment to enable satisfactory operation in frozen ground.

According to the reports on which this article is based, the use of buried plant in urban areas will reduce maintenance expenses. That has been the experience of companies that have made extensive installation of plastic insulated, plastic jacketed cable in rural districts. Good service reliability is indicated by a review of cable troubles for the past several years which shows far less trouble per 100 miles of buried cable than for aerial cable.

A buried system in an urban area needs careful engineering to assure that the plant will provide for party line upgrading, additional lines, and possibly new types of service. The best locations for the service line to each subscriber will have to be determined to avoid damage from digging by subscribers or by other utilities.

Joint Action with Power Companies[2]

HAVING considered the telephone company's part in the rural and urban buried plant program, one naturally wonders about the power company's attitude on burying their overhead plant. In general, power companies are interested in this kind of project because of the appearance factor and service reliability.

A subcommittee of the Edison Institute-Bell System Committee on Plant Coordination, consisting of power company representatives and telephone people, is jointly reviewing all aspects of underground power and telephone service. There are many common problems requiring the same kind of cooperation and study that was needed in the early days of joint pole usage. The power people are concerned with such problems as increasing residential loads due to appliances and air conditioning. Street lighting requirements also complicate the problem, and the presence of gas, water and sewer pipes introduces problems that must be considered. Perhaps, as in the case of the EEI-Bell System Subcommittee, joint studies with other national associations will be required.—*John S. Reed.*

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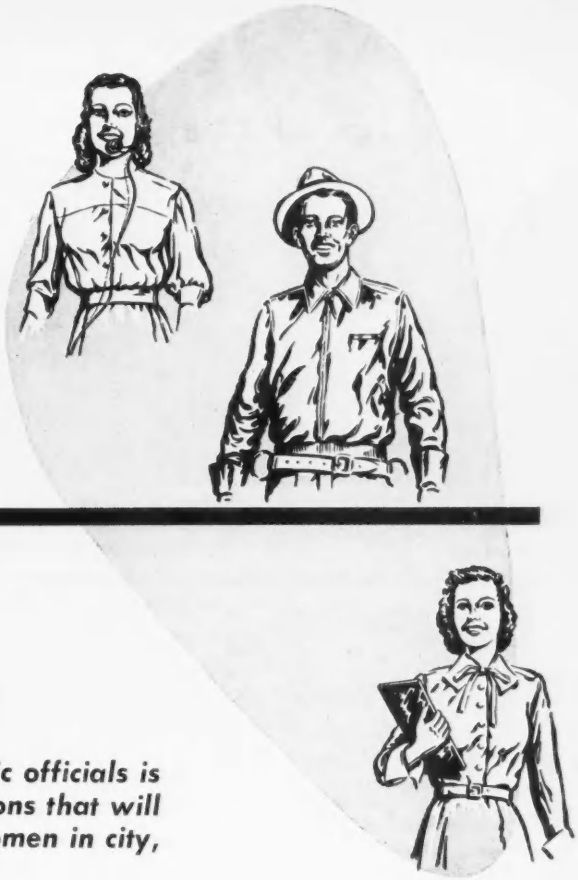
Note: *Papers* 1 *and* 4 *were presented at the Signal Corps of Engineering Laboratories Sixth Annual Wire and Cable Symposium, December*, 1957.

Getting Along

With Public Officials



By ERNEST W. FAIR

Learning the art of getting along with public officials is an important task. Here are seven suggestions that will help you in your dealings with men and women in city, county and state offices.

"THAT *&$&..*.....!" . . . . Lives there a utility executive who to himself has never used such a "blankety-blank" sentence after a run-in with a public official? Probably such an executive would be difficult to find for it is a proved-in fact that the men and women in city, county and state offices with whom we must deal in many phases of our jobs can be cantankerous and make life miserable for a company executive.

Getting along smoothly with such public officials therefore becomes of the utmost importance to an executive, and that happy state of affairs must be reached by means that will still preserve the rights and dignity of the executive himself.

We've talked with a number of executives who have learned the art of handling public officials. Their advice and suggestions are condensed in paragraphs below. Some will apply to one particular individual and some to another but on the whole each suggestion should have an important place in the individual executive's methods of dealing with public officials of every degree and type.

(1) Understanding His Problems is an easy thing to do but many of us go about our business with public officials without any effort to comprehend the problems they face in handling each individual matter.

Each public office has an established and set routine for handling just about every problem that arises. There are definite requirements connected with each project that must be followed; requirements laid down by law which the clerk or official could not change if he so desired. When we attempt to short circuit some of these requirements or procedures we only make this individual's job more difficult and delay the processing of the matter before him.

Whenever and wherever an executive deals with any public official it will be to his advantage to make certain he has an understanding of the routine in that office as it affects the proposal or request he has in mind.

"I always make it easy for these people to help me," one executive told us, "and I've found by making that a rule on any matter, I receive much faster handling and more personal consideration than I did when I attempted to run things through their hands in my own way."

(2) Respect His Dignity or, as one executive puts it, "use a little flattery." Under whatever label the process is placed it is important. Public officials and their clerks get a lot of kicking around which ruffles their feathers. Very seldom do the people who come to them for service treat them with respect and dignity. The individual who does show some respect for the office holder becomes the exception and gains the friendly cooperation of the official and his employes.

(3) Don't Go Over His Head no matter how much political influence you may have with "higher ups." Experienced executives who have such influence still find that it pays to first lay the matter before the public official who must handle it.

To proceed to the top first, puts the official in a

LAST YEAR industry members shown above attended the 1st USITA Engineering-Management Conference at Michigan State University. Enrollment for the 2nd USITA Michigan State University Engineering-Management Conference is scheduled to close early in May. The conference is limited to 75. Anyone who is interested but has not received the attractive brochure may obtain one by directing a request to: John U. Jeffries, assistant professor, Electrical Engineering Department, Michigan State University, East Lansing, Mich.

lower spot in a position of "lost face" and although he may have to follow through you may be sure he will do no more than absolutely required and will always harbor resentment against you for by-passing his own position.

(4) Make Inquiries First on unusual requests you are about to make of any office. A telephone call outlining the problem and asking for suggestions on how to proceed in handling it will elicit much more co-operation from any public official than devising a plan the way you think it should be handled and trying to push it through an official's office.

By making inquiries before proceeding you will often receive an indirect comittment from the official to do everything within his power to expedite the matter in question. Liberal application of such principles of co-operation provide an atmosphere in which the most difficult problems that may arise can be worked out with ease.

(5) Don't Send A Subordinate to deal with a problem that directly concerns the official in the particular department. Such procedure automatically tells the department head you consider his post unimportant and unworthy of your personal attention.

If the matter is one a subordinate can easily handle then it should be placed in his charge but only after a contact has been made between the executive himself and the department head concerned. When this simple procedure is followed there is no "loss of face" involved on the part of the public official and he will usually give the man you send to his office as much consideration as if you went yourself.

(6) Get Acquainted With Public Officials outside of business hours and business matters. Remember a public official feels that he occupies a very high executive position in the world (and sometimes he really does) and he wants to associate with other executives.

While the average public official is bound by rules and regulations in handling matters that must pass through his office he nevertheless has a degree of latitude that can be employed to expedite matters for his personal friends.

If you possess this element of friendship over and above any political influence you may have acquired any public official will go out of his way to help you in handling difficult situations or expediting a matter through the channels of his office.

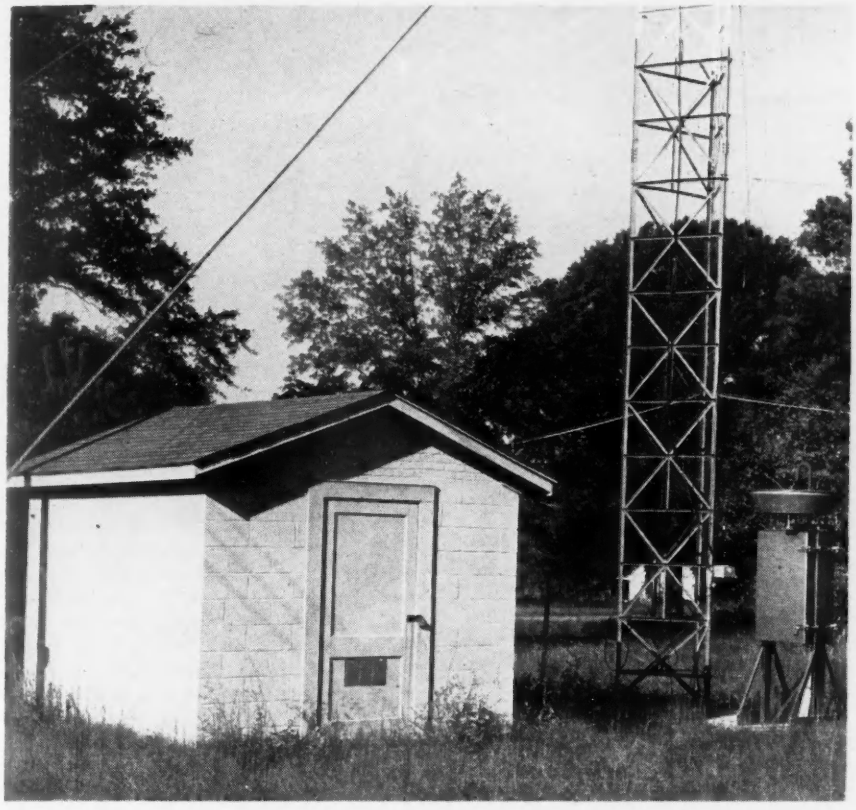
(7) Avoid Taking Petty Details To Him. The executive who calls on a public official to personally handle small routine matters becomes a "pest" and a "trouble maker" and uses up a lot of goodwill he can better save for the time when it will really be needed.

Remember that every public official considers himself a top executive no matter how insignificant his office may be. Treat him as such. Make certain his advice and help is asked from time to time but leave the petty details to the clerks in his office.

There's an art to "throwing one's weight around" in dealing with public officials. When you become obvious about it you may get the immediate job done but you can be certain that you have built up little honest goodwill with that particular individual; the kind of goodwill that will pay off in a hundred ways in the future.

Making one's influence or position felt by a public official comes best through subtle methods. It's a reverse application of the same response that would come from ourselves if such actions were taken by that official. You may be certain that he will like it no better than you would under such circumstances.

Above all we have to realize that the average public official receives more headaches from his job than he ever bargained for; that the office has its frustrations and disappointments and anything we can do as individuals to restore that public official's faith in his own dignity and that of his office will bring forth a response we need in handling our matters that come under his particular jurisdiction. — *Ernest W. Fair.*



This is the base of the microwave tower at Troy. The RF unit and antenna send the signal to the reflector at the top of the tower where it is beamed on to Greenwood. The shack houses emergency power facilities.

Microwave System Proves Real Solution To Greenwood Right-Of-Way Problem

By **BRUCE BARKSDALE***

A RIGHT-OF-WAY problem on planned land line construction in 1953 first led us to the consideration and use of microwave. Now, after four years of service, this link has performed so well, we are adding another.

The Greenwood Telephone Co. serves Greenwood, Ware Shoals, Troy and several other surrounding towns in the Northwest section of South Carolina. We serve about 13,000 telephones in an area of roughly 1500 square miles.

In 1953 initial planning was formed to supply toll trunks between Greenwood (a toll center) and Troy. Conversion of Troy from an operator exchange to an automatic C.D.O. was necessary to coordinate with Toll Trunking to Greenwood.

Land line construction would necessitate unavailable right-of-way through a Forest Preserve area and to avoid this area would mean prohibitive construction cost.

At this time information on microwave performance was rather vague. However, detailed investigation and study of the problems by microwave engineers, an economical satisfactory conclusion was obtained to alleviate our right-of-way problem.

The selection of microwave equipment to match our initial needs of one RF channel and four voice channels was finally decided upon. Even though we supplied emergency standby power equipment, the microwave performance figures did not indicate a need for standby microwave equipment.

Our decision to operate in this manner has met with satisfactory results. The outage time has averaged less than two hours per year; the

**Mr. Barksdale is president Greenwood (S. C.) Telephone Co.*

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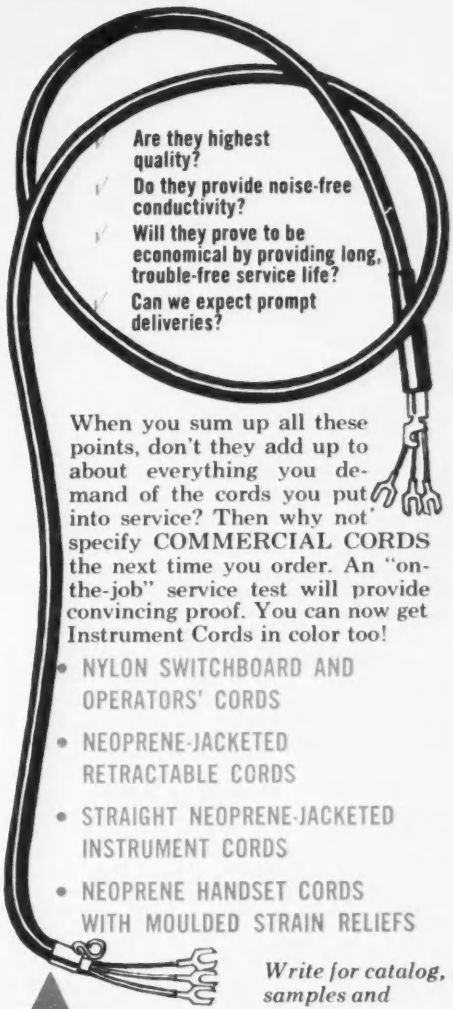
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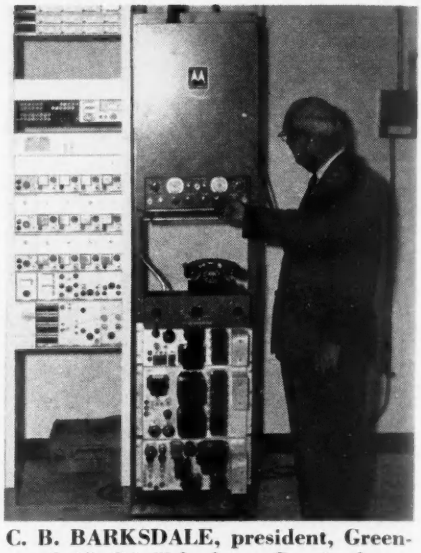
maintenance bill for the first two years of operation was $218, and has remained at an extremely low figure since that time.

I might add at this point, we also operate two mobile telephone systems, one in the 30-40 megacycle band for highway mobile service, and the other in the 152-162 megacycle urban mobile band. Although these systems have had constant usage for the past eight years they have rendered excellent service. The reason I mention this, is that our Chief Radio Engineer, J. E. Duffie, maintains our microwave systems in addition to the mobile units. Mr. Duffie attended Motorola's microwave school and is qualified for the maintenance of the microwave systems. His report as of June indicates all the original klystron tubes, considered the heart of the microwave system, are still in service.

The adaptation of Inter-toll dialing through the Greenwood exchange to Troy over the microwave system has been 100 percent perfect, and we anticipate the same splendid service to the new Ware Shoals exchange now in the completion stage.

The Ware Shoals exchange will be the latest dial automatic exchange with a microwave installation of 12 voice channels, 11 being used for toll and operator trunks and the other channel providing six telegraph channels for teletypewriter circuits to the Riegel Textile Corp. at Ware Shoals.

J. E. DUFFIE, radio and microwave engineer, Greenwood Telephone Co., adjusts microwave equipment at the Troy, S. C. terminal of the hop between Troy and Greenwood.



C. B. BARKSDALE, president, Greenwood (S. C.) Telephone Co., is shown with the microwave equipment at Ware Shoals. The microwave system provides operator and toll trunks from the automatic dial exchange in Ware Shoals to operator positions in Greenwood. This system carries 12 voice channels, 11 of which are used for the toll and operator trunks. The 12th channel provides six telegraph channels for teletypewriter circuits to a Ware Shoals mill.

This second microwave system is a one-hop system of approximately 18½ miles long. The gently rolling terrain between the Greenwood and Ware Shoals towers only require a 140-foot tower at Ware Shoals.

The passive reflectors mounted on the towers are served by roof-mounted "dish" antennas. Roof mounted "dish" antennas keep the antennas near the microwave RF cabinets which greatly simplifies maintenance and extensive use of wave-guide facilities.

The Greenwood Telephone Co. is confidently enthusiastic with the performance of its microwave system and plan future utilization of such equipment where the occasion presents itself.—*C. Bruce Barksdale.*

Filing Cost Guide

HANDY GUIDES for measuring filing costs and results along with a detailed plan of action to improve filing efficiency are made available to management in a 28-page manual, "How to Measure Your Filing Costs and Efficiency," published by Remington Rand Division of Sperry Rand Corp. — *Write Readers' Service, TE&M, 7720 N. Sheridan Rd., Chicago 26, Ill.*

Retractile Cords

A REVISED catalog with several innovations, has been published by Koiled Kords, Inc., New Haven, Conn., manufacturers of retractile cords for communications, home and industry.

The catalog revisions involve a simplification of the tabular matter giving types, sizes and colors available. The form in which this material is presented is designed to simplify the selection and ordering of the retractile cords best suited to the needs of the customer. Included in the 16-page booklet are many illustrations showing a variety of applications for retractile cords and the catalog section lists all sizes and types of power cords and other items.

Pocket Size Calculator

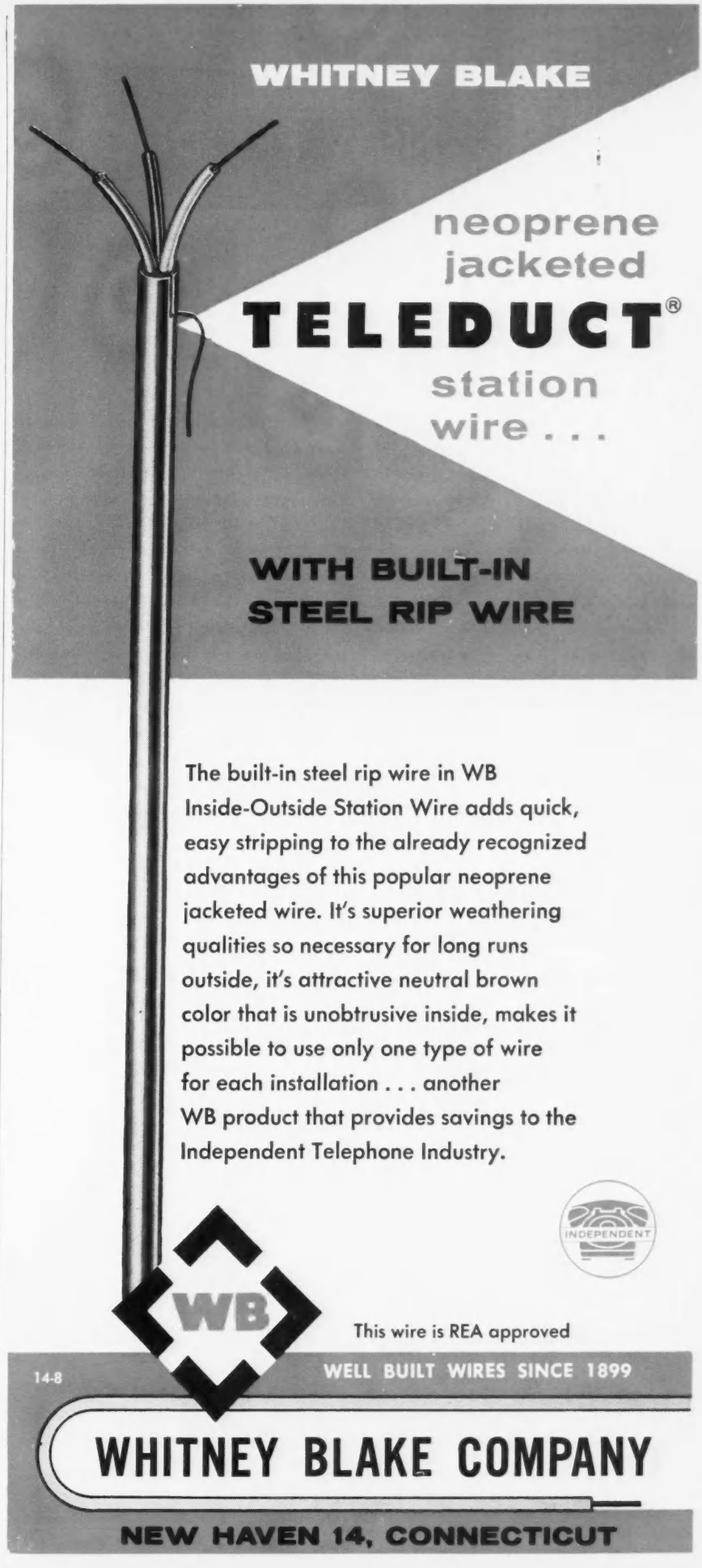
A VALUABLE slide rule type calculator, providing complete electrical and mechanical specifications on all standard series of Continental Connectors, is now available from DeJur-Amsco Corp., to engineering personnel who specify these components in their work. The 3″ x 8½″ wide pocket size makes it a convenient reference tool that can be carried easily.

On the reverse side of the rule is a "Body Molding Comparator" that provides values of various properties of plastic compounds used in molding Continental Connectors.

"Vic-Easy" Bulletin

VICTAULIC CO. of America has released a new 6-page, 2-color, illustrated bulletin describing the "Vic-Easy" method of quick-coupling lightweight pipe or tubing. The bulletin details installation and operating features, explains how the use of lightweight pipe with roll-grooved ends effects substantial savings, and illustrates typical applications.

To obtain your copies write Readers' Service Department, 7720 N. Sheridan Rd., Chicago 26, Ill.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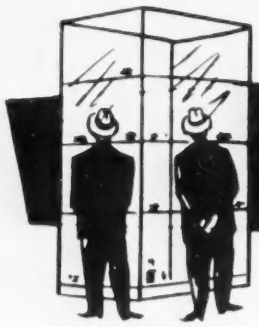


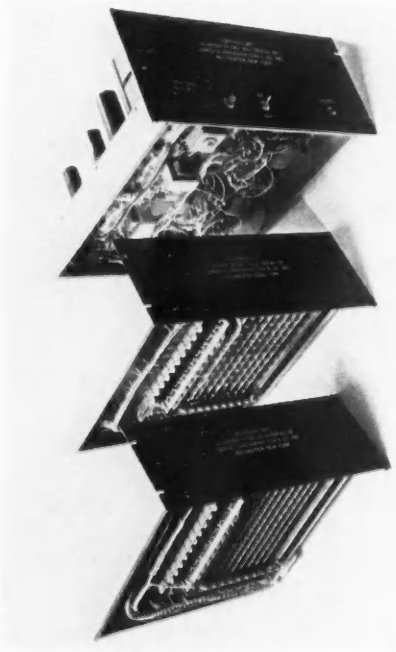
NEW PRODUCTS' SHOWCASE

By DICK REYNOLDS

High Speed Crossbar Scanner

THE CUNNINGHAM Model SC2 Scanner is an instrument capable of scanning 500 pairs of input connections at a rate of 50 pairs per second, bringing the selected pair to a set of output terminals. According to the manufacturer, James Cunningham, Sons & Co., Inc., the properties of this instrument make it well suited for scanning thermocouple voltages, strain gage voltages, analog computer outputs, and in general those applications where a high quality contact, together with high scanning speed, are paramount considerations.

This Scanner is designed around the Cunningham Type F Crossbar Switch. These switches are operated from Burroughs magnetic-beam-switching commutators which are buffered with RCA 2N301 transistors. In order to satisfy the speed requirement, a novel type of logic combining the advantages of electronic circuitry with those of the crossbar switch has been incorporated. The combination results in a high-speed scanner. The contact characteristics of the crossbar switches are such that extremely low-level signals impressed on this scanner will be reproduced faithfully.



Cunningham Model SC2 high speed Crossbar Scanner, consisting of 3 separate units mountable on Grant slides in a standard 19-inch rack. At the top is shown the switching control unit with its MBS tubes. The crossbar switches are mounted in the lower two units with the input terminations (not shown) on the top side of the chassis.

While the scanner is designed to operate at a speed of 50 pulses per second, with a minimum dwell time of 5 milliseconds at each selected pair of points, both higher and lower repetition rates are possible. As the repetition rate is decreased, the dwell time is correspondingly increased.

This scanner will step with positive pulses of at least 25 volts amplitude and a rise time between .02 and 1 microsecond. The duration of the pulse is not critical as long as it is greater than .1 microsecond.

In addition to the selected pair, an "End of Scan" indication is provided. This is a contact which closes after the last point has been scanned, and can be used to actuate external equipment to interrupt the flow of stepping pulses to the scanner. At the moment the "EOS" contact closes, the scanner is made to return to a "Home" position exclusive of the 500 pairs of scanned points. It is also possible to arrange homing to occur only when a pushbutton is depressed, with the scanner stopping after the 500th point is scanned, and remains on this last point.

Consisting of three separate units, the Scanner is made to mount on Grant #350 slides in a standard 19-inch width rack. The overall panel height required for the scanner is 22¾ inches. Construction is suitable for laboratory and test stand types of installations.—*Check New Product* 270.

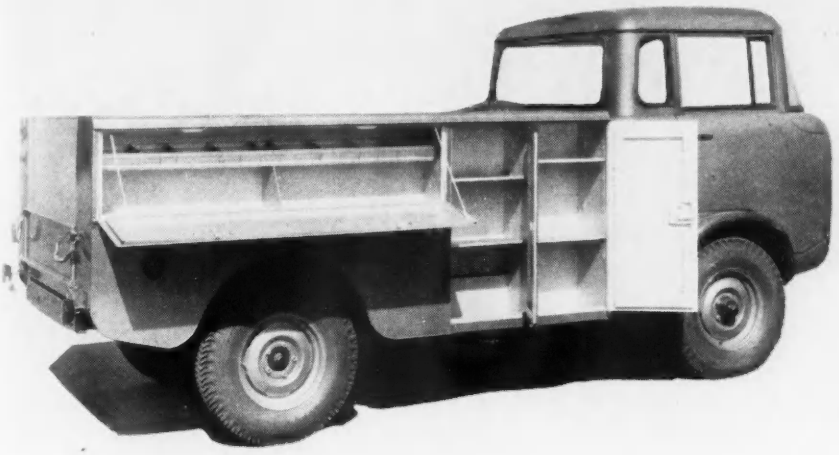
New Spring-Tensioned Screwdriver

A SPRING-TENSIONED screwdriver designed for use by telephone company repairmen, installers and linemen is now being manufactured by Suttle Equipment Corp.

This specialized tool, designated S. E. 2348, contains a spring-tensioned, pointed plunger which runs through the bit to exert a steady pressure upon the small screw or piece part. This insures positive seating, whether or not there is a hole in the screw slot. The long-lasting bit is double-ended, with two sets of points, one set on either end. These case-

hardened bits will accommodate the end of practically all miniature screws.

The screwdriver is knurled for almost its entire 4½-inch length for the surest grip possible. The handle is also equipped with a rotating knob which permits the screwdriver to turn easily in the palm as it is used. For further information, *Check New Product* 271.



MODEL WO-84 Utility Body For FC 150 Jeep.

New Service Bodies For "Jeeps"

STAHL Metal Products, Inc., 3409 W. 140th St., Dept. TE&M, Cleveland 11, Ohio, has announced production of two new utility bodies for installation on Willys 4-wheel drive "Jeeps" to provide excellent off-the-highway units for telephone operations.

Model WO-84 is 84" long and is built for installation on the Willys FC-150. Model WO-107, designed for use on the FC 170 Willys, is 107" long.

Both body units feature: checker plate steel floor; tubular steel reinforced side panels; rigid, seal-tight doors; big compartments; recessed handles and locks, with all locks keyed alike.

Optional equipment includes: sliding steel roof (low type) for enclosing bulk loading space, and overhead ladders. For complete information, *Check New Product* 272.

Aluminum Paints

FOUR-PAGE brochure from Paint Sales Div., Joseph Dixon Crucible Co. explains why aluminum and aluminum graphite paints give high protective service on steel, galvanized iron, tin plate and other hard-used surfaces. Brochure contains full data *Check New Product* 273.

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ADVERTISING, Directories — *General Telephone Directory Co., 1800 Oakton Street, Des Plaines, Ill.*—[ADV. 1]

BELTS — CLIMBERS — COMPLETE LINEMEN'S EQUIPMENT, *W. M. Bashlin Co., Bashlin Bldg., Grove City 1, Pa.*—[ADV. 2]

BOOTHS—Acoustic Telephones — *Sherron Metallic Corp., 1202 Flushing Ave., Brooklyn 6, N. Y.*—[ADV. 3]

BORING MACHINES, EARTH — *Highway Trailer Co., Edgerton, Wisc.*—[ADV. 4]

CORDS, Switchboard (with or without plugs), Instrument (retractable and regular) and Operators — *Commercial Cord & Supply Co., Inc., 26 Main St., Clifton Springs, N. Y.*—[ADV. 5]

CORDS, Switchboard & Telephone — *Runzel Cord & Wire Co., 4727-31 Montrose Ave., Chicago 41, Ill.*—[ADV. 6]

POLES, Southern Yellow Pine — *Taylor Colquitt Company, 217 E. Main St., Spartanburgh, S. C.*—[ADV. 7]

POLES, Southern Yellow Pine — *Texas Creosoting Co., Orange, Texas.*—[ADV. 8]

PROTECTIVE EQUIPMENT — *Reliable Electric Company, 11333 Addison St., Franklin Park, Ill.*—[ADV. 9]

TELEPHONE EQUIPMENT AND SUPPLIES — *Telephone Repair & Supply Company, 1760 Lunt Avenue, Chicago 26, Ill.*—[ADV. 10]

WIRE, Insulated — DATED DROP WIRE — Neoprene or Weatherproof — *Alphaduct Wire & Cable Co., New Brunswick, N. J.*—[ADV. 11]

WIRE, Insulated Drop and Bronze or Copperweld — *Acorn Insulated Wire Co., Inc., 36 Freeman St., Pawtucket, R. I.*—[ADV. 12]

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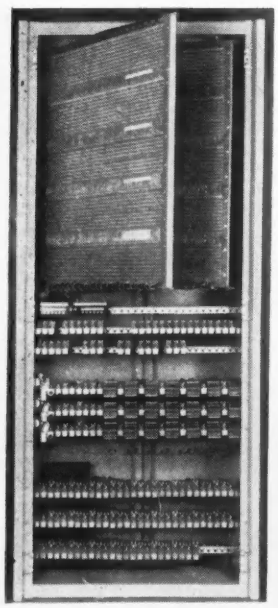

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Capacity 30,000
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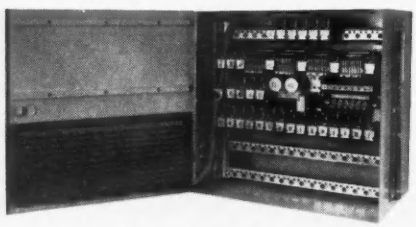

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Mounting. 40 Lines
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is available to route calls for
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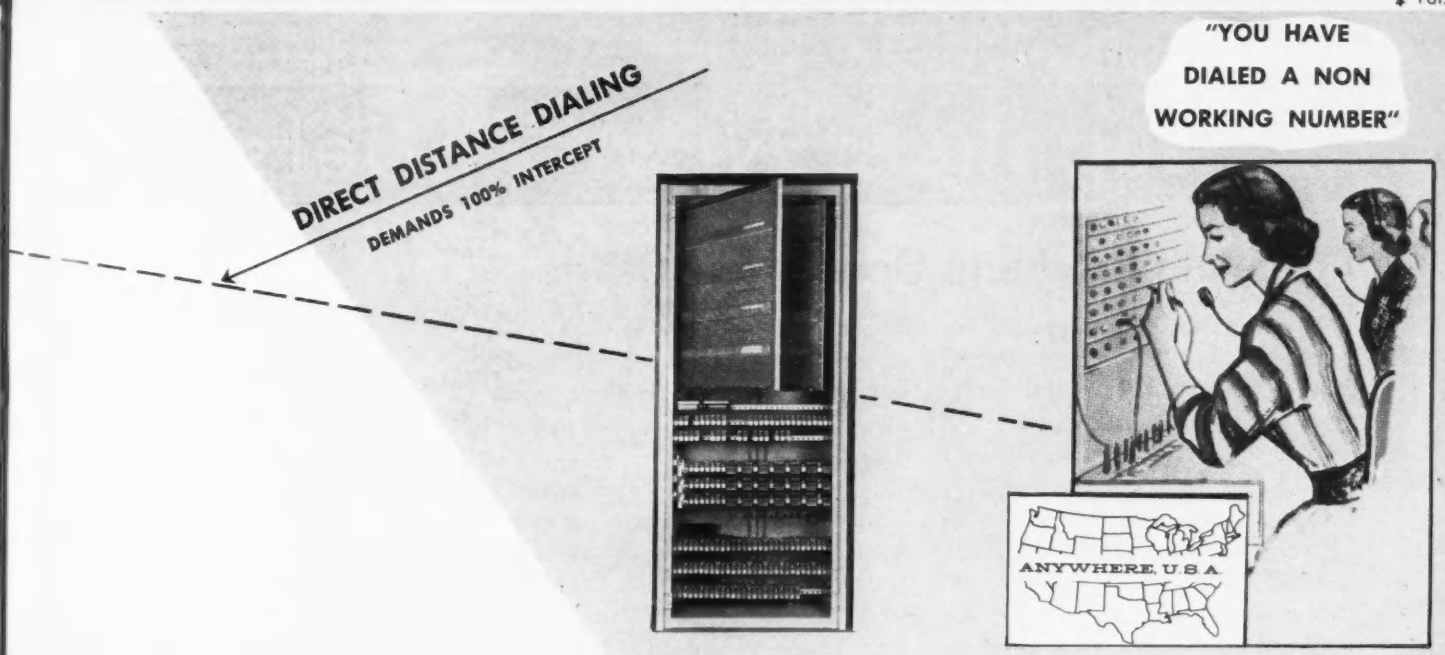
UNIVERSAL 100% COMPUTER INTERCEPT*

* Pat. Pen



Buy the ultimate requirements in intercept equipment. Not "merely adequate" . . . not 20% . . . not 99% . . . but 100% intercept is the ultimate requirement for direct distance dialing. Universal Computer Intercept offers 100% intercept at nominal cost, compatible with any make switchboard, and easily inserted anywhere in the dialing train. The unit is completely factory wired and may be installed by regular maintenance personnel. Simplicity of design lends to minimum maintenance requirements.

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  Your TPL will have the effective features of TPS intercept *to add to* your toll settlement.
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suppliers NEWS briefs

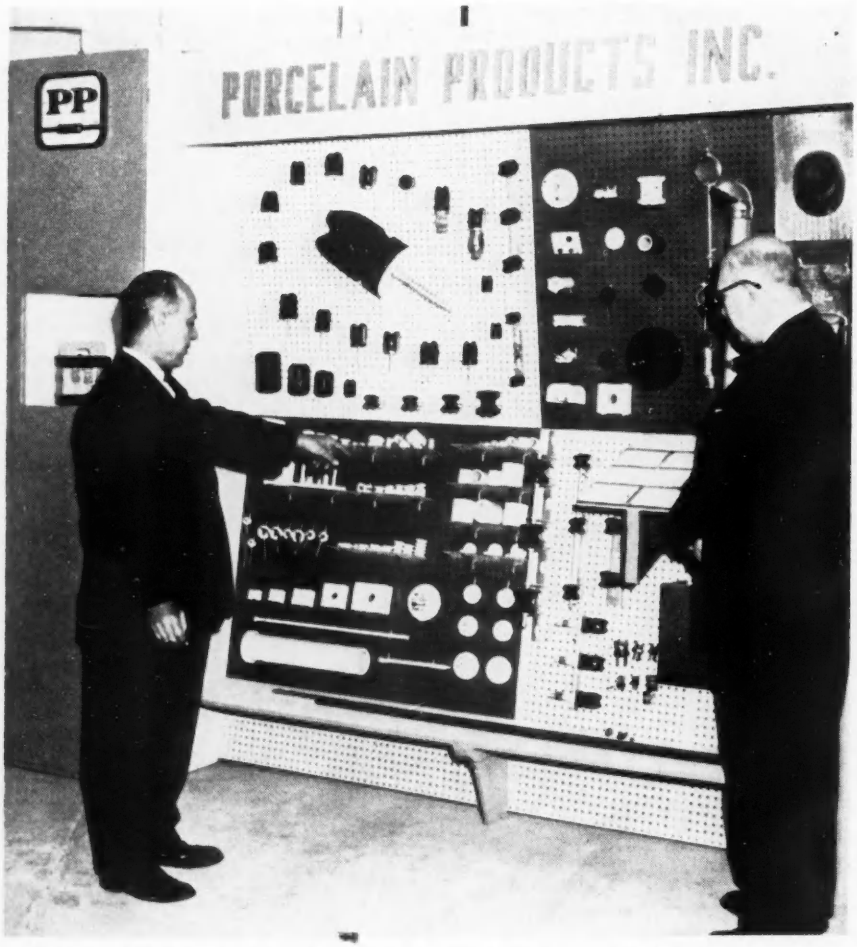
Porcelain Products Opens New Office

NEARLY 400 guests attended the recent two day "Progress In Porcelain" open house held at the Carey, Ohio plant and offices of Porcelain Products Inc. The open house celebration was also the formal opening and public presentation of Porcelain Products' new office facilities recently constructed at the Carey plant. The new office has been occupied by the staff and personnel of sales, advertising and purchasing departments formerly based in Findlay, Ohio.

"The consolidation," said E. G. Ryman, vice president and general manager, "has been accomplished with improved customer service and operating efficiency, foremost in our minds."

Guests attending the "open house" included friends and relatives of Porcelain Products employes, officials of The A. B. Chance Co., Centralia, Mo., Porcelain Products parent company, customers and suppliers.

Porcelain Products Inc., has been in the manufacture of dry process porcelain for low voltage applications at Carey, Ohio, and wet process high voltage porcelain at Parkersburg, W Va., for over sixty-four years.



E. G. RYMAN, left vice president and general manager of Porcelain Products, Inc., shows N. A. TOALSON, executive vice president of A. B. Chance Co., some of the products manufactured at the Carey plant.

Gunn and Marsh Join Kellogg's Sales Staff

C. A. GUNN and Wade K. Marsh have joined the general sales staff of Kellogg Switchboard & Supply Co., a division of International Telephone & Telegraph Corp., Chicago. O. C. Bailey, general sales manager, announced that Gunn had been named sales manager for industrial products and Marsh general sales engineer.

In his new capacity, Gunn is responsible for industrial sales which includes relays, apparatus, specialized switching systems and other component parts to industrial firms. Marsh will direct Kellogg's field service engineers and assist the telephone companies with their maintenance of Kellogg equipment, Bailey explained.

Gunn, who attended Rice Institute and earned his electrical engineering degree from the University of Texas, brings 11 years of experience in various phases of plant, engineering and commercial department of the operating field to his new position. For three years — 1943 to 1946 — Gunn saw active duty with the Navy, serving as an officer aboard the fast carrier USS Franklin D. Roosevelt. He was recalled to active duty during the Korean conflict.

The native Texan began his career with Southwestern Bell Telephone Co. He joined Southwestern States Telephone Co. in 1949 as a commercial engineer and was later promoted to general commercial superintendent. He became active in the sales field in 1951 as a manufacturers representative, calling on industrial, telephone, railroad, pipe line and power companies.

A Navy veteran of World War II,

March sandwiched electrical engineering studies at Ohio State University between work in telephony. He began his career with IT&T as an installation supervisor at the Federal Telephone & Radio division in 1949.

In 1953, Marsh, a native of Columbus, Ohio, advanced to installation foreman. Two years later he was transferred to another IT&T division, Federal Electric Corp., and elevated to field engineer. He was later promoted to Field Engineering Supervisor.

Marsh came to Kellogg one year ago and served as Southwestern division engineer before he was appointed to his present position. With the IT&T divisions, Marsh has traveled extensively. Highlights in his career include helping install and test the first dialing over microwave equipment from San Juan to Poncel, Puerto Rico, and designing and testing the first multiple test set later adopted by Federal Telephone and now in use on their assembly lines.

Reliable Electric Co. Appoints Wallace Johnson

RELIABLE Electric Co., Franklin Park, Ill., has announced the appointment of Wallace H. Johnson to its sales staff.

Johnson has had extensive experience in the telephone industry. He

WALLACE H. JOHNSON

was associated with General Telephone Co. of Calif. for 16 years. For the past year he has been a sales engineer for Aro Equipment Corp.

Johnson will represent Reliable

GENERAL MACHINE PRODUCTS COMPANY, INC.
Old Lincoln Highway at Pa. Turnpike, Trevose, Pa.

Aerial Tents
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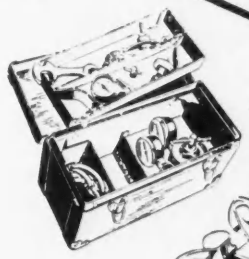
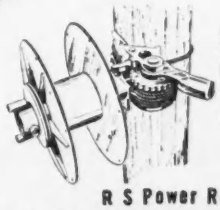
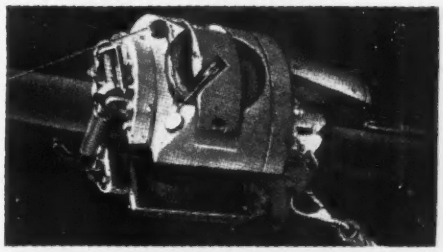
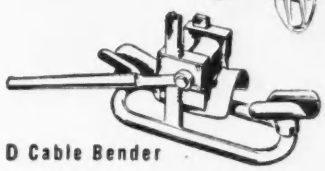

Pressure Testing Kit


R S Power Reel



C R Power Reel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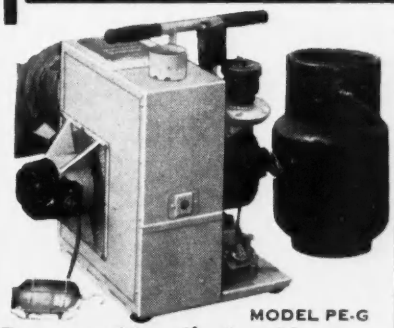

MODEL PE-G
Propane Ventilating Heaters
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Especially designed for year round underground operations of telephone, telegraph, gas, water and electric utilities. Provides 300 to 800 cu. ft./min. fresh air in summer, heated fresh air in winter. Attached 160 watt generator provides current for light. Complete unit operates on propane. Weighs 74 lbs., portable. Model PE same as above only without generator. Electric models also available.

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RAce 2-2834 Dept. 9, Denver 23, Colo.

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CLEARING HOUSE

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TO LOCATE WORKERS—JOBS—MERCHANDISE

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He's lionized on Michigan Boulevard

Gerry Gaydos of our Chicago branch office doesn't care about being a social lion. But he feels like roaring with pride at the way you're lionizing the construction and maintenance supplies he helps distribute.

Along Michigan Boulevard and many a Main Street you've shown that you appreciate the care we take with your supply orders; the speed with which we deliver (overnight to many locations); the personalized attention you get on your smallest orders. And since we have a lion's share of experience in telecommunications, you can be sure we understand your problems and know how to help you solve them.

If you haven't yet made the acquaintance of our supply organization, you can get lost in a jungle of claims and counterclaims. But there's no need for it. Simply place your supply orders with the Stromberg-Carlson branch office in your area, then sit back and relax with complete assurance that they will be serviced quickly, correctly, and with our sincere appreciation.

In Chicago our Sales Office and Warehouse is located at 564 W. Adams St. Phone: STate 2-4235.

S-C

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Electronic and communication products for home, industry and defense

Electric in Texas, New Mexico, Louisiana and southern Mississippi. His office is located at 4350 North Central Expressway, Dallas 6, Texas.

Buckeye Named Distributor For Budelman Electronics

ROBERT L. Feistel, sales manager, Budelman Electronics Corp., Stamford, Conn., has announced the appointment of Buckeye Telephone & Supply Co. of Columbus, Ohio, as Eastern Distributor for Budelman radio and telephone carrier products.

Buckeye Telephone & Supply Company's office and warehouse is located just outside the Columbus City limits in the Ohio State University area at 1250 Kinnear Road. Ample facilities for the economical handling of inbound and outbound shipments are provided by means of a private railroad siding and dock coupled with large truck dock platforms. The newest in material handling equipment helps to keep the supply lines flowing through the storage area.

Arthur F. Adams Dies

ARTHUR Frank Adams, 77, former chairman of Automatic Electric Co. and chief executive of many other companies in the telephone industry, died March 28 of a heart ailment at Miami, Fla. He had retired in 1955 after 50 years at the top level of the communications industry.

Son of a Wisconsin farmer, Arthur Adams was born January 3, 1881 in Auroraville, and after graduating from high school, at 17, he went to work for the Berlin (Wisc.) Telephone Co. as a lineman. He joined Theodore Gary in 1905, and rose fast in the Gary organization becoming, at the age of 24, vice president of the Home Telephone Co., Joplin, Mo.

In 1907, Gary, his son Hunter L. Gary and Adams formed the organization that became Theodore Gary & Co. They organized and obtained control of various telephone properties in the midwest, and such manufacturing companies as Automatic Electric Co. of Chicago and Automatic Telephone Manufacturing Co., Ltd. of Liverpool and International Automatic Telephone, Ltd.

In time, Adams became president

ARTHUR F. ADAMS

of Theodore Gary & Co., Associated Telephone & Telegraph Co., and the Gary Services & Investment Co. He later became chairman of the board of these companies as well as chairman of the Anglo-Canadian Telephone Co., the British Columbia Telephone Co., and Automatic Electric Co.

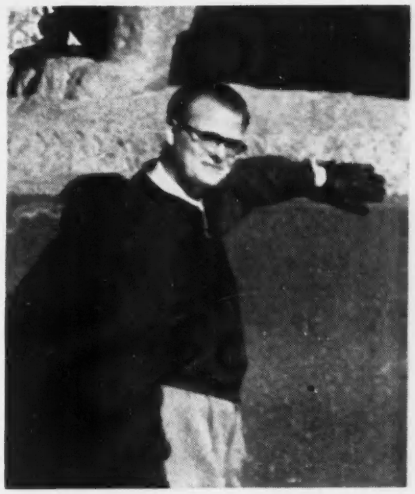
For a time, he was chairman of the board of the Commerce Trust Co. of Kansas City, Mo.

In World War I he was named by President Woodrow Wilson's administration to serve on the four-man committee known as the General Operating Board in charge of Federal Operation of Telegraph and Telephone Systems in the United States.

For his services during World War II, he was awarded the United States Army Certificate of Appreciation for the cooperation and loyal service he rendered in that conflict, and the contributions he made to the fulfillment of the responsibilities to the Army Signal Corps, especially in providing military communications.

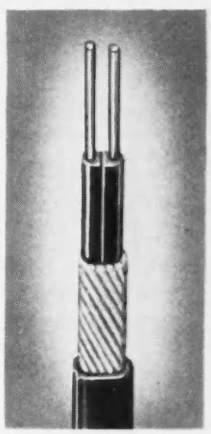
In 1946, the Strowger Automatic Club, an employe organization at Automatic Electric Co. presented Adams with the annual Talbot G. Martin Award for his contributions to the communication industry, in adversity and prosperity, and in war and in peace.

In 1952, Adams was honored by the Italian government with the Stella della Solidarieta Italiana (Star of



A roaring success: TELEPRENE by Whitney Blake

About 12 years ago Whitney Blake Company introduced TELEPRENE, one of the first neoprene jacketed drop wires offered to the Independent Telephone Industry.



Before TELEPRENE, the average life of a drop wire was seven years. The first TELEPRENE drops were installed about 12 years ago and are *still in service* showing no appreciable signs of deterioration.

A "cheap" wire that needs frequent replacement, that causes service interruptions, calling for emergency service, is far from cheap . . . it is the most expensive wire you can buy.

It is now, and always has been, the policy of Whitney Blake to make *better*, not *cheaper*, wire. The same high quality is built into every product bearing the Whitney Blake name.

When you need drop wire, be sure to specify TELEPRENE by Whitney Blake.

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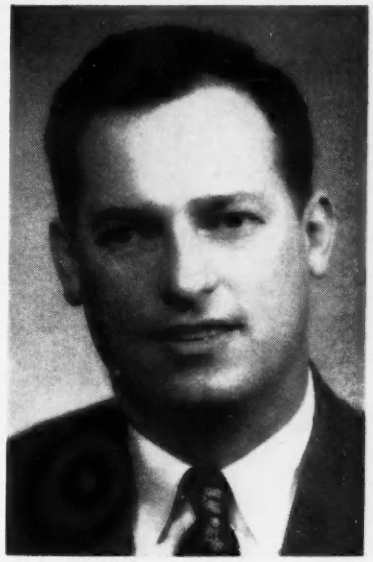
Italian Solidarity) for his participation, over many years, in Italian communications and in the reconstruction of Italy since the war.

He is survived by his widow, the former Alice E. Clark, two grandsons, Arthur Adams Swanson of Boston and Carl E. Swanson of Cocoa Beach, Florida; a brother Joseph E. Adams of Wautoma, Wisconsin; and three great-granddaughters.

One daughter, Mrs. Wayne K. Holloway, died recently in the Panama Canal Zone, and another daughter, Mrs. Ruth Adams Kline died in 1925.



S. FRED NIXON, III

S. Fred Nixon, III, Dies

SAMUEL FREDERICK NIXON, III, died Sunday, April 13, following a lengthy illness.

Born in Westfield, N. Y. on June 25, 1916, Fred, as he was affectionately and generally known, spent his entire business career in the Independent telephone industry. His grandfather, Samuel Frederick Nixon, Sr., organized in 1897, the five small telephone companies which were merged to form the Chautauqua & Erie Telephone Corp., of which Fred was general manager at the time of his death. His father, Samuel Frederick Nixon, II, is president of the company and still active in its management. Two brothers, Alastair and Roderick are active in the management of the firm.

Fred Nixon worked for his father in the Independent telephone business at odd hours as a high school boy, during vacation periods and after graduation from Dartmouth, began a full-time career in Independent telephony. His career was interrupted for a tour of duty with the Signal Corps of the United States Army during which time he served in France, Holland, Belgium and Germany. He retired from Army service in 1946 with the rank of Major.

Fred's return to the telephone business marked the beginning of a gigantic improvement and expansion program for the companies under the Nixon family management. The companies were merged to form the Chautauqua & Erie Telephone Corp.; the several outlying exchanges were converted to dial operation and, the big step, dial conversion in Westfield, was accomplished only last March 2. All of this program was carried out under the supervision and management of S. Fred Nixon, III. At the same time, he sought the opportunity to serve his friends and neighbors in a great many civic capacities.

His talents and capabilities were widely recognized by his colleagues in Independent telephony and he was accorded many honors and served in many capacities in New York State Telephone Association. He was a director of the organization from 1917 to 1957, except for a two year period, 1949 to 1951, when he served as secretary and assistant treasurer. He was elected vice-president in 1951 and elected to the office of president in 1953, then re-elected for another one year term in 1954. He served as chairman of the Association's Executive Committee from 1955 to 1957 and during the 10 years of active participation in the Association activities he was a member of a great many other committees.

Mr. Nixon is survived by his widow, Millie Anne Nixon; three daughters, Melinda and Maria of Tulsa, Okla., and Melanie Hall Nixon of Westfield, N. Y.; a son, Samuel Frederick Nixon, IV of Westfield, N. Y.; his father and mother of Westfield, N. Y.; two brothers Alastair and Roderick of Westfield, N. Y.; and, a sister, Mrs. John Wagar of Mechanicville, N. Y.

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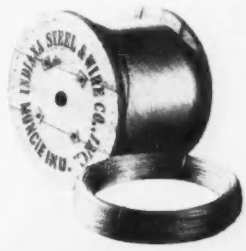
Sag and Tension Data For Strand When Supporting Telephone Cable

WRITE FOR THIS NEW MANUAL!

Those who design, build and maintain aerial telephone cable lines will find the technical information in this manual both pertinent and useful.

The sag and tension data cover three sizes of "Utilities Grade" strand when used as messenger to support plastic-sheath or lead-sheath cable. These data will be helpful in determining the size of strand to be used for a particular weight of cable and span length, and in answering other questions relating to design problems.

This Manual will be mailed without obligation to all interested telephone men. Ask for Manual No. MS-58.



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Published in each issue of Telephone Engineer & Management. Advertising forms close on 10th of month preceding date of issue for issue dated the 1st, and 25th of month preceding date of issue for issue dated 15th. Rates are 15 cents a word except for Situation Wanted ads, which are 10 cents per word. In figuring cost of ads, count each word of address in number of words used. All ads payable in advance. Minimum charge $2.00. Special rates for display ads on request. Send copy and Box number replies to Telephone Engineer Publishing Corp., 7720 N. Sheridan Rd., Chicago 26, Ill.

HELP WANTED

WANTED: Well qualified cable splicers and helpers. Write: Neale Construction Company, 3100 Topeka Avenue, Topeka, Kansas.

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PLANT ENGINEERS — For large Independent Telephone Company. Some experience necessary. In reply state age, educational and employment history. Address reply to Personnel Supervisor, Rochester Telephone Corporation, 10 Franklin Street, Rochester 4, New York.

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TELEPHONE ENGINEER — For nationwide utility with headquarters in Fairfield County, Connecticut. Must be an Electrical Engineering graduate with knowledge of toll separation studies and management experience in plant, traffic and commercial departments. Managerial and administrative ability are necessary. This position offers a unique opportunity for an engineer to use and develop all of his capabilities. Reply, sending complete resume to Box No. 1 c/o Telephone Engineer & Management.

NEED capable man to take over commercial and bookkeeping department of Independent telephone company. Write Box 4, c/o Telephone Engineer & Management.

CABLE SPLICERS, Station Installers, Equipment Installers, Linemen, Experienced men needed. Steady work, good pay. Henkels & McCoy, 1211 Kenmore Avenue, Elkhart, Indiana, or 6100 N. 20th St., Philadelphia, Pa.

ENGINEER WANTED — Excellent opportunity available with a fast growing telephone company in Florida. Job requires degree in engineering and at least fifteen years of outside (cable and open wire) plant engineering experience. Submit outline of education, employment history, telephone experience and salary requirements, including age, references and recent photograph to Box 5, c/o Telephone Engineer & Management.

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Now. Pay out take up wire REELS for Line and Service wire,
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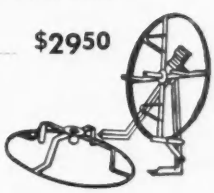

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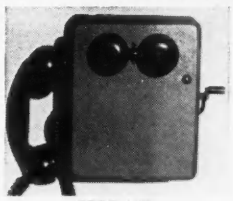

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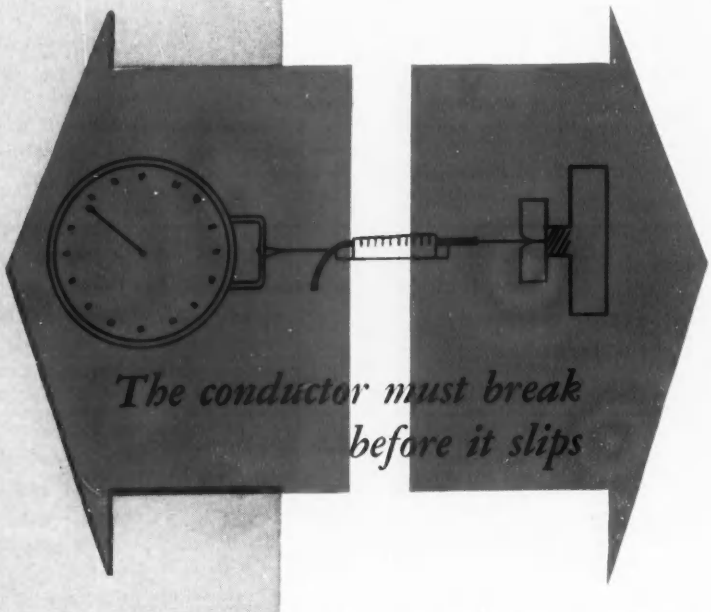

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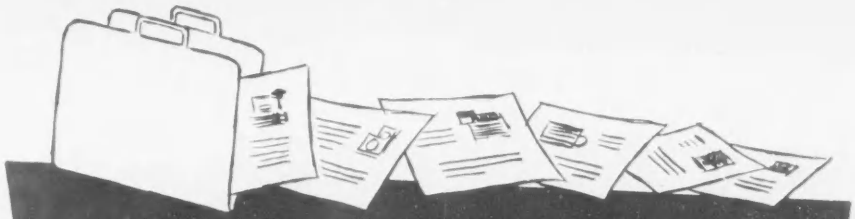
The appointment of N. C. COX to the position of sales representative for Superior Cable Corp., Hickory, N. C., has been announced by James H. Bowman, vice president in charge of sales. Cox will cover the North Carolina, South Carolina, Virginia and West Virginia territories. From 1954 until he joined Superior Cable Corporation in 1956, Mr. Cox was associated with a national manufacturer as a sales representative.

James C. Parks Dies

JAMES CLAY PARKS, 76, president of Prairie Grove Telephone Co., Prairie Grove, Ark., and the "Dean of the Telephone Industry in Arkansas" died suddenly at his home on March 30.

Mr. Parks began as an operator with the Prairie Grove exchange in 1901 when there were only a few telephones in town and none in the rural areas. He was famous in Arkansas for his laughing, knee slapping sessions of "way back when" incidents such as when telephone service would have to wait while the operator hoed her garden, and the unbelievable times when people knew that a "wire couldn't holler." He and his three sons, Barry, Donald and Joe, built the company to 1500 dial stations serving the towns of Prairie Grove, Lincoln, Farmington, Dutch Mills and Morrow in northwest Arkansas County.

He leaves surviving his widow, the three sons mentioned above, another son, J. C. Parks, Jr. of Los Angeles, and several grandchildren.



ADVERTISERS and their AGENCIES

Acorn Insulated Wire Co., Inc. 49

Alaphaduct Wire & Cable Co. 49, 62
Hicks & Greist, Inc.

American Tel. & Tel. Co. 38-39
N. W. Ayer & Son, Inc.

Ansonia Wire & Cable Co. 24
George T. Metcalf Co.

Automatic Electric Sales Corp. 4-5, 6

Bashlin Co., W. M. 49
Davis & McKinney Advertising

Bohnsack Equipment Co. 61

Buckeye Telephone & Supply Co. 61

Cable Spinning Equipment Co. 10

C & D Batteries, Inc. 28
John T. Hall & Co.

Chance Co., A. B. .....
Arthur R. Mogge, Inc.

Charles Machine Works, Inc. 14
Galloway-Wallace Adv. Agency

Chester Cable Corp. 8
George Homer Martin Assoc., Inc.

Commercial Cord & Supply Co., Inc. 43, 49
Scrivener & Rice, Inc.

Communi-Catering 58

Crane Inc., Carl C. 58

Cullom & Ghertner Co. 58

Davis Construction Co. 58

General Machine Products Co., Inc. 55

General Tel. Directory Co.
.....49, & Inside Front Cover
Kudner Agency, Inc.

Harris-McBurney Co. 58

Henkels & McCoy 58, 60
William Jenkins Advertising, Inc.

Highway Trailer Co. 49
Arthur Towell, Inc.

Holub Industries 14
Connor Associates, Inc.

Independent Telephone Repair Co. 61

Indiana Steel & Wire Co., Inc. 59
Bob Robinson, Inc.

International Business Machines .....
Benton & Bowles, Inc.

Kander & Co., Allen 58

Kellogg Switchboard & Supply Co.
.....50-51, 52-53
The Fensholt Advertising Agency

Kleinschmidt Laboratories, Inc. 15
Alex T. Franz, Inc.

Koppers Co., Inc. 58
Smith, Taylor & Jenkins, Inc.

Leich Sales Corp. 2-3
Armstrong Advertising Agency

Massey-Ferguson, Inc. 35
Associated Adv. Agency, Inc.

McGrath Engineering, Inc. 58

Monsanto Chemical Co.
(Plastics Division) 11
Needham, Louis & Brorby, Inc.

Morrison-Pelsue Co. 55
International Adv. Co.

National-Standard Co. 40
Griswold Eshleman Co.

National Telephone Supply Co. ....Back Cover
Meldrum & Fewsmith, Inc.

Neale Construction Co., Inc. 58, 60

Neuses, Inc., P. K. 46
Jacobson & Tonne Advertising

North Electric Co. 26-27
Coleman ,Todd & Associates

Ostlund, Evert M. 58

Philco Corp.
(Government & Industrial Div.) 20-21
Maxwell Associates, Inc.

Preformed Line Products Co.
.....Inside Back Cover
Bayless-Kerr Co.

Reliable Electric Co. 9, 49
Merchandising Advertisers

Rex Corporation 13
Franklin Adv. Service

Runzel Cord & Wire Co. 49
Henke & Associates

Sherron Metallic Corp. 49
Joseph P. Schneider, Inc.

Stromberg-Carlson Co. 32-33, 56-57, 63
The Rumrill Co., Inc.

Superior Cable Corp. 17
Bennett Advertising

Suttle Equipment Co. 58
Proebsting, August & Harpham, Inc.

Taylor-Colquitt Co. 49
Lowe & Hall Advertising

Telectric Co. 61

Telephone Repair & Supply Co. 49

Texas Creosoting Co. 49

Thornhill Publishing Co. 22

Truck Equipment Co. 22
Tool & Armstrong, Adv.

Universal Controls Corp. 52-53
Clarke, Dunogan & Huffhines, Inc.

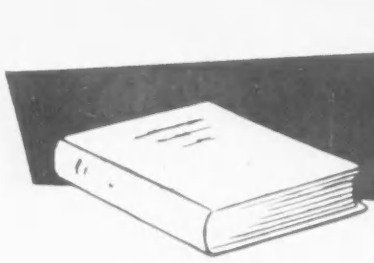
U. S. Instrument Corp. 19

Utility Tool & Body Co. 46

Whitaker Reel Mfg. Co. 61

Whitney Blake Co. 18, 23, 47
J. Roy McLennan Advertising

Williams Inspection Co., A. W. 58



THE BACK OF THE BOOK

By JOHN G. REYNOLDS

"Christmas In April"

IT'S A LITTLE late or early, to be thinking of Christmas but the colors of New York Telephone Co.'s new Bronx directories are a reminder of the Yuletide season. Delivery of the directories started April 8 and the simulated green leather covers of the alphabetical and the solid red covers of the classified made a colorful present to telephone customers.

Over 850,000 directories were delivered throughout the borough, a sizeable and weighty job for some 400 deliverymen. There are 475,000 listings in the two new directories of which over 100,000 represent changes from last year.

These handy guides to just about everybody in the Bronx are celebrating their 30th anniversary — the fifth as separate volumes and if you want a barometer to judge how the Bronx has grown there is none better than the directories. Since 1946 the number of people with telephones has more than doubled and the Yellow Pages of the Red Book include more than half again as many businesses and services.

Telephone Tragedy

FOR four years a contributor to the Chicago Tribune's "Line O' Type Or Two," *Cozy Joe* of South Bend, has been fascinated by this listing in the South Bend telephone book: "*Gulp Burp & Belch R. R.*, 511 *E. Bronson, AT 7-3180.*"

When the new book came out, Joe looked and the listing was gone. He immediately wrote in, and asked, "Why?" The editor of "Line-O-Type" checked and discovered the owner of the G.B.&B. is Henry Spieker, who says he is a navy chief bosun's mate, retired, and an interior decorator. The R. R. is a model, built by Mr. Spieker, with 22 locomotives, 200 cars, some freight, some passenger — 3.5 millimeters to a foot, so the cars are less than 2 inches tall. There are 2,000 feet of track, stations, trestles, and other needed equipment.

Now the South Bend children were entranced, Mr. Spieker said, and the reason he made this telephone listing was so they could telephone the R. R. One might call and say, "I want to send two dozen olives to Spain," or some other small jest, and all was fun, games, and happiness.

Then, Mr. Spieker said dolefully, came the dark era. Someone, apparently a practical joker, circulated widely the rumor that Mr. Spieker was operating an illicit venture under this odd telephone listing.

People began to telephone and knock on Mr. Spieker's door all times of the day and night. Now Mr. S. admitted he has a fairly low fusing point, and one day he met a man he thought might be responsible so he seized this man and began to bounce his head off a wall, which the fellow did not appreciate.

Both hired attorneys, and while the thing did not get to court, the attorney cost Mr. Spieker $90, and, as he said, the fight only lasted two minutes, which is $45 per minute.

So Mr. Spieker just got tired of the whole thing and took his R. R. out of the phone book . . . And, said the editor of *Line O' Type Or Two*, "*that is the reason it is gone. . . .*"

"Day For Jokes

LAST month the editors of "*Long Lines*" magazine took a close look at the many explanations offered for the custom of playing practical jokes on the first of April and found there is no agreement on any one of them."

"There is," said *Long Lines*, "a general impression that the custom has something to do with the observance of the spring equinox."

"April fooling became customary in France after the adoption of the reformed calendar in 1564. This made the year begin on January 1 instead of April 1. It had been customary for people to send gifts and exchange calls on New Year's under the old calendar and conservatives objected to the change. Jokesters sent these diehards mock gifts on April 1 and made them the object of similar pranks.

"It was not until the beginning of the 18th century that April fooling became common in England and the early settlers of America brought the custom with them. Today, it is observed largely by small boys . . ."

However, as *Long Lines* reported, some adults also participate and if on April 1 you found a note on your telephone to call Mr. Fox or Mr. Campbell at a certain number, the habitat of these gentlemen was undoubtedly the local zoo.

New Belgium Charge

A BELGIUM subscriber tells us a charge is payable when a telephone subscriber in Belgium fails to replace his telephone on the hook. The charge is 20 or 40 francs (about 40 or 80 cents) according to whether or not it is necessary to send a workman to the subscriber's premises. . . .

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